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Soil Stockpile Report
Parcel A, Report No. 1

McDonnell Douglas C-6 Facility
Los Angeles, California

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SOIL STOCKPILE REPORT
PARCEL A
REPORT NO. 1

McDONNELL DOUGLAS C-6 FACILITY
LOS ANGELES, CALIFORNIA

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SECTION 1.0

INTRODUCTION

In October, 1996, Montgomery Watson (Montgomery) was retained by McDonnell Douglas Realty Company (MDRC) to assist with the redevelopment of Parcel A (the Site) of their C-6 facility located in Los Angeles, California. Figure 1 presents the C-6 facility. Figure 2 delineates the Site. The Site was formerly used to manufacture and store aircraft parts.

1.1 OVERVIEW

The Site consists of the northernmost quarter of the C-6 facility, encompassing approximately 50 acres. Demolition of many of the following buildings at the Site is underway: Building 29, 33, 34, 36, 37, 41, 43/44, 45, 57, 58, 61, 66-A and 67.

Information gathered during the data compilation and evaluation phase of this project indicated historical industrial activities at the Site may have released petroleum products and hazardous substances to the surface and subsurface.

A soil sampling and remedial excavation effort is being conducted in conjunction with the removal of foundations, slabs, and below-ground structures. The purpose of this effort is to assess soil quality and remove soil affected with petroleum hydrocarbons and other chemicals in preparation for redevelopment of the Site. Soil which is determined to be affected with petroleum hydrocarbons and other chemicals is excavated and stockpiled at the Site.

As of the date of this report, stockpiled soil present at the Site has been generated from two source areas as summarized below:

1) Building 37 remedial excavations.

2) The set from the motion picture "The Volcano," which was recently filmed elsewhere on the C-6 facility property. For convenience, this stockpiled soil is referred to as the "volcano project soil."

1.2 PURPOSE AND OBJECTIVE

The purpose of this document is to evaluate the quality of the stockpiled soil generated from the Building 37 remedial excavations, and the "volcano project soil." Specifically, this report establishes a facility-wide strategy for assessing and screening the analytical data so that the stockpiled soils can be divided into two categories: 1) soils requiring treatment or off-site disposal, and 2) soils suitable for use as construction backfill at the site.

Along with its companion document, *Post-Remedial Excavation Confirmation Sample Report, Parcel A, Report No. 1* (Montgomery Watson, 1997), this report documents that the Site excavation efforts meet the established cleanup criteria and therefore protect drinking water and the health of future users.

SECTION 2.0

BUILDING 37 REMEDIAL EXCAVATION STOCKPILES

Building 37 housed foundry operations in the south central portion of the building, and large machine presses and lathes throughout the building. Foundry and press machines were contained in 15 large pits (approximately 8 feet deep, 20 feet wide, and 60 feet long). A ground floor room on the east side of the building housed the tooling department where employees would produce parts for the machines throughout the facility. A parts cleaning tank sat in a sump within this room. Two clarifiers were located outside the east wall of the building. A hydraulically-powered elevator was located inside the northeast portion of the building.

A 20 feet by 20 feet grid has been superimposed over the footprint of Building 37 as presented in Figure 3. As of the date of this report, two remedial excavations have been completed and two are in progress. The location of each remedial excavation is presented in Figure 3. Remedial excavations are recorded using the following nomenclature :

Building No. (B#) - Remedial Excavation (RE) - Chronological Number (#)
e.g., B37-RE-1

Pertinent information related to each of the Building 37 remedial excavations and the stockpiled soil is presented below. The locations of each stockpile are presented in Figure 4 through Figure 8.

Excavation/Stockpile	Approximate Volume	Date of Excavation	Stockpile Location(s)
B37-RE-1	200 cu yds	7 Feb 97	Southeast of Building 37
B37-RE-2	170 cu yds	28 Feb 97	East of Building 29
B37-RE-3	35 cu yds	3 Mar 97	East of Building 29
B37-RE-4/(A1 - H) B37-RE-4/(I - T)	8,610 cu yds total	3 Mar 97 — 17 Apr 97	Stockpiles designated "A1" through "H" located east of Building 29. Stockpiles designated "I" through "T" located within and adjacent to the Building 37 footprint.

2.1 SOIL SAMPLING

Grid sampling and hot spot sampling has been employed at Building 37. Detailed procedures for these activities are outlined in the *Sampling and Analysis Plan for Demolition Activities at the Douglas Aircraft Company C-6 Facility* prepared by Integrated Environmental Services, Inc. and previously submitted to the Regional Water Quality Control Board (RWQCB). These procedures can be summarized as follows:

Grid Sampling: The systematic collection of soil samples at predetermined, regular intervals of a grid placed over the footprint of Building 37. A 20 feet by 20 feet grid is being employed. A photoionization detector (PID) is used to measure headspace organic vapor concentrations in the freshly exposed soil at each grid node. Soil samples are collected for analysis where at least one of the following conditions exist: 1) the headspace VOC reading exceeds 5 ppm, (2) areas where staining of the soil is visible, or (3) areas where odors are noticeable.

Hot Spot Sampling: Hot spot sampling is conducted at pre-determined locations where former items of concern were located (e.g., pits, sumps), and at other locations where demolition activities reveal soil which may have been affected by petroleum hydrocarbons or other chemicals of concern. Hot spot samples are collected for chemical analysis from a location where at least one of the following conditions exist: (1) the headspace VOC reading exceeds 5 ppm, (2) areas where staining of the soil is visible, or (3) areas where odors are noticeable.

2.2 SOIL EXCAVATION

Remedial excavation to remove affected soil is conducted when one of the following conditions are discovered: (1) elevated PID readings, (2) visible staining, and (3) noticeable odors. A conservative approach is being employed such that soil which exhibits any of these characteristics is excavated and stockpiled.

Remedial excavations are being performed using heavy equipment (excavators, front-end loaders) associated with the building demolition effort. Air monitoring in accordance with South Coast Air Quality Management District Rule 1166 is being conducted.

The maximum depth of any excavation is approximately 10 feet below grade. Excavated soil is segregated based on the location from where it is removed. Soil stockpiles are placed on asphalt or plastic sheeting, and covered with plastic sheeting to protect the soil from the elements. A sample of the excavated soil (stockpile sample) is collected and analyzed for approximately each 250 cubic yards of material. The locations of each stockpile are presented in Figure 4 through Figure 8.

Confirmation samples are collected from the walls and floor of the excavations. Soil excavations continue until the confirmation samples indicate that: (1) PID readings are less than 5 ppm, (2) visibly stained soil has been removed, and (3) soil exhibiting odor has been removed.

2.3 SAMPLING METHODS AND ANALYTICAL SCHEDULE

2.3.1 Grid Sampling

Grid samples are collected by first exposing "fresh" soil beneath the surface using a stainless steel utensil or similar device. A PID is used to measure headspace organic vapor concentrations in the freshly exposed soil at each grid node. Soil samples are collected for analysis where at least one of the following conditions exist: 1) the headspace VOC reading exceeds 5 ppm, (2) areas where staining of the soil is visible, or (3) areas where odors are noticeable.

Soil samples are collected for analysis in pre-cleaned, stainless steel sleeves by driving the sleeve into the soil with a rubber mallet. The ends of the sleeves are then covered with Teflon film and secured with plastic end caps. A unique sample identification using the following nomenclature is written in indelible ink on a sample label and attached to the sleeve.

Building No. (B#) - Grid Coordinate (alpha numeric) - Sample Depth (feet)
e.g., B37-G7-4'

The grid coordinate system used in the naming of samples from Building 37 is presented in Figure 3.

Sample sleeves are placed in a cooler with blue ice and transported under chain-of-custody to a State-certified laboratory for analysis. Generally, grid samples have been analyzed according to the analytical schedule presented in Table 1.

2.3.2 Hot Spot Sampling

Hot spot samples are collected by first exposing "fresh" soil beneath the surface using a stainless steel utensil or similar device. A PID is used to measure headspace organic vapor concentrations in the freshly exposed soil at each location. Soil samples are collected for analysis where at least one of the following conditions exist: 1) the headspace VOC reading exceeds 5 ppm, (2) areas where staining of the soil is visible, or (3) areas where odors are noticeable.

Soil samples are collected for analysis in pre-cleaned, stainless steel sleeves by driving the sleeve into the soil with a rubber mallet. The ends of the sleeves are then covered with Teflon film and secured with plastic end caps. A unique sample identification using the following nomenclature is written in indelible ink on a sample label and attached to the sleeve.

Building No. (B#) - Grab Sample (GS) - Chronological Number (#) - Sample Depth (feet)
e.g., B37-GS-42-3'

Sample sleeves are placed in a cooler with blue ice and transported under chain-of-custody to a State-certified laboratory for analysis. Generally, hot spot samples have been analyzed according to the analytical schedule presented in Table 1.

2.3.3 Stockpile Sampling

Stockpile samples are collected at a frequency of approximately one sample per 250 cubic yards of soil removed.

Generally, two sampling methods have been employed: First, samples from the actual stockpiled soil have been collected by using a shovel to cut vertically into the side of a stockpile at each sample location to expose "fresh" soil; samples are then collected from the exposed vertical wall. Second, stockpile samples have been collected from the bucket of the excavator as the soil is being removed by first exposing "fresh" soil beneath the surface using a stainless steel utensil or similar device.

Soil samples are collected for analysis in pre-cleaned, stainless steel sleeves by driving the sleeve into the soil with a rubber mallet. The ends of the sleeves are then covered with Teflon film and secured with plastic end caps. A unique sample identification using the following nomenclature is written in indelible ink on a sample label and attached to the sleeve.

Building No.(B#) - Remedial Excavation No.(RE#) - Stockpile Chronological Number (SP#)
e.g., B37-RE3-SP4

Sample sleeves are placed in a cooler with blue ice and transported under chain-of-custody to a State-certified laboratory for analysis.

Additionally, representatives of the RWQCB requested the collection and analysis of additional stockpile confirmation samples to verify and confirm the concentrations of chemicals in excavated soil. Two iterations of confirmation stockpile samples were collected using the first method of collection described above from the sides of the stockpiled soil. A unique sample identification using the following nomenclature was written in indelible ink on a sample label and attached to the sample sleeve.

Building No. (B#) - Remedial Excavation (RE#)- Stockpile Confirmation (SPCONF)
e.g., B37-RE1-SPCONF
e.g., B37-RE3-SPCONFA

Generally, stockpile and stockpile confirmation samples have been analyzed according to the analytical schedule presented in Table 1.

2.4 STOCKPILE SOIL QUALITY

2.4.1 B37-RE-1 Stockpile

Remedial excavation B37-RE-1 was completed on February 7, 1997. Approximately 200 cubic yards of stockpiled soil associated with B37-RE-1 was removed with an excavator, transported in a front-end loader, and stockpiled southeast of Building 37 as presented in Figure 4.

The following types of samples have been collected and analyzed to evaluate the soil quality in the B37-RE-1 stockpile:

- Stockpile Samples
- Stockpile Confirmation Sample
- Hot Spot Samples

One stockpile sample and one confirmation sample were collected from the stockpiled soil at locations presented in Figure 4. The analytical data for these samples are summarized in Table 2.

During the demolition sampling activity, data collected from two hot spot samples — collected at grid location M-22 (see Figure 3) — were used in the decision to conduct a remedial excavation at this location. Hot spot sample analytical data are summarized in Table 3.

A complete set of laboratory analytical reports for the sampling associated with B37-RE-1 is presented in Appendix A-1.

2.4.2 B37-RE-2 Stockpile

Remedial excavation B37-RE-2 was completed on February 28, 1997. Approximately 170 cubic yards of stockpiled soil associated with B37-RE-2 was removed with an excavator, transported in a front-end loader, and stockpiled east of Building 29 as presented in Figure 5.

The following types of samples have been collected and analyzed to evaluate the soil quality in the B37-RE-2 stockpile:

- Stockpile Samples
- Stockpile Confirmation Sample
- Hot Spot Samples

One stockpile sample and one confirmation sample were collected from the stockpiled soil at locations presented in Figure 5. The analytical data for these samples are summarized in Table 4.

During the demolition sampling activity, data collected from one hot spot sample — collected at grid location F-6.5 (see Figure 3) — were used in the decision to conduct a remedial excavation at this location. Hot spot sample analytical data are summarized in Table 5.

A complete set of laboratory analytical reports for the sampling associated with B37-RE-2 is presented in Appendix A-2.

2.4.3 B37-RE-3 Stockpile

Remedial excavation B37-RE-3 was completed on March 3, 1997. Approximately 35 cubic yards of stockpiled soil associated with B37-RE-3 was removed with an excavator, transported in a front-end loader, and stockpiled east of Building 29 as presented in Figure 6.

The following types of samples have been collected and analyzed to evaluate the soil quality in the B37-RE-3 stockpile:

- Stockpile Samples
- Stockpile Confirmation Sample
- Hot Spot Samples

One stockpile sample and two confirmation samples were collected from the stockpiled soil at locations presented in Figure 6. The analytical data for these samples are summarized in Table 6.

During the demolition sampling activity, data collected from one hot spot sample — collected at grid location M-23.5 (see Figure 3) — were used in the decision to conduct a remedial excavation at this location. Hot spot sample analytical data are summarized in Table 7.

A complete set of laboratory analytical reports for the sampling associated with B37-RE-3 is presented in Appendix A-3.

2.4.4 B37-RE-4 Stockpile

Remedial excavation B37-RE-4 began on March 3, 1997 and was completed on April 17, 1997. Approximately 8,610 cubic yards of stockpiled soil associated with B37-RE-4 was removed with an excavator, transported by truck, and stockpiled in two separate locations.

For convenience, the soil has been subdivided into stockpiles designated alphanumerically "A1" through "T". Stockpiles A1 through H are located east of Building 29 as presented in Figure 7. Stockpiles I through T are located within and adjacent to the footprint of Building 37 as presented in Figure 8.

The following types of samples have been collected and analyzed to evaluate the soil quality in the B37-RE-4 stockpiled soil:

- Stockpile Samples
- Stockpile Confirmation Sample
- Grid Samples
- Hot Spot Samples

Thirty-nine stockpile samples and two confirmation samples have been collected. The locations where stockpile samples and confirmation samples were collected from the stockpiled soil are presented in Figure 7 and Figure 8. The remainder of the stockpile samples were collected from the bucket of the excavator as the soil was removed from the excavation. Stockpile and confirmation sample analytical data are summarized in Table 8.

During the demolition sampling activity, data collected from six grid samples were used in the decision to conduct a remedial excavation at this location. The grid location and depth where each sample was collected is presented in Table 9 and may be cross-referenced to Figure 3 to identify the sample location. Grid sample analytical data are summarized in Table 9.

During the demolition sampling activity, data collected from eight hot spot samples were used in the decision to conduct a remedial excavation at this location. The grid location and depth where each sample was collected is presented in Table 10 and may be cross-referenced to Figure 3 to identify the sample location. Hot spot sample analytical data are summarized in Table 10.

A complete set of laboratory analytical reports for the sampling associated with B37-RE-4 is presented in Appendix A-4.

SECTION 3.0

VOLCANO PROJECT SOIL

The motion picture "The Volcano" was recently filmed on the C-6 facility property, but not at the Site. Approximately 3,500 cubic yards of soil associated with the movie set ("volcano project soil") has been transported to the Site and stockpiled east of Building 37 as presented in Figure 9.

3.1 INITIAL SAMPLING

Soil samples have been collected at a frequency of approximately one sample per 250 cubic yards of stockpiled volcano project soil. Samples from the stockpiled soil have been collected by using a shovel to cut vertically into the side of a stockpile at each sample location to expose "fresh" soil; samples are then collected from the exposed vertical wall.

Soil samples were collected for analysis in pre-cleaned, stainless steel sleeves by driving the sleeve into the soil with a rubber mallet. The ends of the sleeves were then covered with Teflon film and secured with plastic end caps. A unique sample identification using the following nomenclature was written in indelible ink on a sample label and attached to the sleeve.

Volcano project soil (VSS) - Stockpile Sample No. (SP#)
e.g., VSS-SP1

Sample sleeves were placed in a cooler with blue ice and transported under chain-of-custody to a State-certified laboratory for analysis.

Representatives of the RWQCB requested the collection and analysis of stockpile confirmation samples to verify and confirm the concentrations of chemicals in the volcano project soil. Confirmation samples were collected using the method of collection described above. Confirmation samples are identified using the following nomenclature:

Volcano project soil (VSS) - Confirmation Sample (CONF)
e.g., VSS-CONF

The location where each sample was collected is presented in Figure 9.

Volcano project soil stockpile samples and confirmation samples were analyzed using the methods presented in Table 1.

3.2 ADDITIONAL SAMPLING

Based upon the finding of elevated copper concentrations in the vicinity of sample VSS-SP9, the RWQCB requested two additional series of soil samples be collected from the volcano project soil stockpile.

The first series of additional samples was collected in the vicinity of VSS-SP9. Five additional samples designated VSS-SP9A through VSS-SP9E were collected using the previously described sample collection method. The location where each sample was collected is presented in Figure 9. The five samples were submitted for analysis of metals using analytical methods presented in Table 1.

The second series of additional samples was collected using hand auger tools and a drive hammer. The auger was used to bore through the stockpile to approximately 5 feet above ground surface, and a sample was collected using the drive hammer. A total of four samples were collected and were designated VSS-SP15 through VSS-SP18. The location where each sample was collected is presented in Figure 9. These samples were also submitted for analysis of metals using the analytical methods presented in Table 1.

3.3 STOCKPILE SOIL QUALITY

Twenty-three stockpile samples and one confirmation sample were collected during the initial and additional sampling activities. Analytical data for these samples are summarized in Table 11. A complete set of laboratory analytical reports is presented in Appendix A-5.

SECTION 4.0

DATA SUMMARY AND CONCLUSIONS

This section presents the methodology to be used throughout the project for the identification of soils that are suitable for use as backfill. In addition, this section summarizes the analytical data associated with each stockpile at the Site and uses the aforementioned methodology to evaluate whether current soil stockpiles are suitable for use as backfill, or require treatment and/or off-site disposal.

4.1 BACKFILL SOIL SCREENING METHODOLOGY

The backfill soil screening criteria have been developed to satisfy two primary objectives: (1) residual concentrations in backfill materials must be below levels projected to impact underlying drinking water sources, and (2) residual concentration in backfill materials must be below levels projected to potentially impact human health under future construction and commercial/industrial activities at the Site.

In accordance with these objectives, individual screening criteria were developed for both drinking water and human health protection. The development of each of these screening criteria is discussed below followed by a summary of how these values will be implemented in the evaluation of soil suitability for backfill purposes.

Drinking Water

The generalized hydrostratigraphic succession at the Site is as follows (Kennedy/Jenks, 1996(b); Dames & Moore, 1993; Department of Water Resources, 1961):

SURFACE
Bellflower Aquitard
Gage Aquifer
El Segundo Aquitard
Lynwood Aquifer

Depth to groundwater at the Site is approximately 65 feet. Hydrostratigraphic information from voluminous data collected at the neighboring Del Amo and Montrose Chemical Superfund Sites can be correlated with subsurface information collected at the Site. Hydrostratigraphic correlations suggest that the shallowest groundwater at the Site occurs in the Bellflower Aquitard, which is not recognized as a drinking water source in the region (Dames & Moore, 1993).

Although the depth to the top of the Gage Aquifer should vary from approximately 120 to 150 feet (from west to east) across the Site, the Gage Aquifer is not utilized as a source of drinking water in the region (Dames & Moore, 1993). Consequently, the shallowest

drinking water resource in the region would therefore be the Lynwood Aquifer, projected to occur at the depths of approximately 210 to 240 feet (from west to east) across the Site.

Based on the depth to the first drinking water source, the following permissible concentrations have been approved by the RWQCB:

Analytes	Permissible Level
TRPH	
C4 - C12 (VOCs)	2000 mg/kg
C13 - C22 (SVOCs)	10,000 mg/kg
C22+ (Heavy Ends)	50,000 mg/kg
Metals	TTLC and 10 times STLC

Note:
A waste extraction test is performed on samples with concentrations greater than 10 times STLC but less than TTLC.

Human Health

Site-specific health-based screening criteria (HBSC) were developed by Integrated Environmental Services, Inc. using standard United States Environmental Protection Agency (USEPA) and California Environmental Protection Agency (Cal/EPA) methodologies. HBSC values were derived assuming future commercial industrial land use with an interim construction phase. Each HBSC will be used as a predictor of the risk posed by individual VOC, SVOC, PCB and metal contaminants in soil. The additive effects of multiple contaminants have been accounted for by setting target risk levels at $1x10^{-6}$ for carcinogens and 0.2 for toxicants. The final cumulative risks for all contaminants will be addressed in the post-remedial risk assessment. Table 12 summarizes the HBSCs to be used at the Site. Appendix B provides a more detailed discussion of the methodologies used to derive these values.

Evaluation Process

All soil excavated at the Site will undergo the soil screening evaluation process depicted in Figure 10. This evaluation process incorporates both drinking water and human health-based criteria. Soils that fail any portion of this test will be subjected to treatment prior to use as backfill or disposed of off-site. Once soils have passed all aspects of the evaluation procedure, they should be made readily available for use as backfill.

4.2 STOCKPILE EVALUATIONS

Chemicals of concern at the Site can be summarized as follows:

- Petroleum hydrocarbons
- VOCs

- SVOCs
- PCBs
- Metals

The sampling and analysis program for the Building 37 remedial excavations and the volcano project soil was conservatively focused on these chemicals of concern by generally implementing the following analytical schedule:

- All samples were analyzed for TRPH and metals (except additional volcano project soil samples which were analyzed for metals only).

- All samples which contained TRPH in concentration greater than 10,000 mg/kg were subsequently analyzed for carbon chain length.

- All grid samples were additionally analyzed for VOCs and SVOCs.

- All stockpile samples were additionally analyzed for VOCs and SVOCs (except additional volcano project soil samples which were analyzed for metals only).

- For hot spot samples, TRPH was used as an initial screen to determine which samples would be analyzed for VOCs and SVOCs; only that sample with highest TRPH collected from a particular hot spot area was analyzed for VOCs and SVOCs.

- One stockpile confirmation sample from B37-RE-3 and one stockpile confirmation sample from B37-RE-4 were additionally analyzed for PCBs.

4.2.1 B37-RE-1 Stockpile

Analytical data for soil samples associated with the B37-RE-1 stockpile are presented in Table 2 and Table 3. These data are summarized and evaluated below.

Petroleum hydrocarbons: Hot spot sample B37-GS-4A contained the highest TRPH concentration (30,600 mg/kg) and is considered to conservatively represent soil quality in this stockpile. The carbon chain analysis on this sample revealed 1,600 mg/kg (C4 - C12), 5,600 mg/kg (C13 - C22), and 10,300 mg/kg (C23+). These hydrocarbon chain concentrations are below the permissible levels for TRPH.

VOCs: VOCs were not detected in any soil sample associated with the B37-RE-1 stockpile. Furthermore, those hydrocarbon compounds which were reported in the volatile hydrocarbon chain fraction (C4 - C12) are not VOC compounds of concern which would be reported under EPA Method 8260.

SVOCs: All concentrations of detected SVOCs were below their respective HBSC. Additionally, other hydrocarbon compounds which were reported in the semi-volatile hydrocarbon chain fraction (C13 - C22) are not SVOC compounds of concern which would be reported under EPA Method 8270.

PCBs: PCB analysis was not conducted on B37-RE-1 stockpile soils.

Metals: All concentrations were below their respective TTLC, 10 times STLC, and below their respective HBSC values.

Conclusion: The data suggest that the B37-RE-1 stockpiled soil is protective of drinking water and human health. Approval to use this stockpiled soil for backfill at the Site is requested.

4.2.2 B37-RE-2 Stockpile

Analytical data for soil samples associated with the B37-RE-2 stockpile are presented in Table 4 and Table 5. These data are summarized and evaluated below.

Petroleum hydrocarbons: Hot spot sample B37-GS-33 contained the highest TRPH concentration (9,900 mg/kg) and is considered to conservatively represent soil quality in this stockpile. A carbon chain analysis was not performed on this sample because the concentration was below the 10,000 mg/kg threshold concentration.

VOCs: VOCs were not detected in any soil sample associated with the B37-RE-2 stockpile.

SVOCs: All SVOCs identified are significantly below their respective HBSC values. Additionally, other hydrocarbon compounds which were reported in the semi-volatile hydrocarbon chain fraction (C13 - C22) are not SVOC compounds of concern which would be reported under EPA Method 8270.

PCBs: PCB analysis was not conducted on B37-RE-2 stockpile soils.

Metals: All concentrations were below their respective TTLC and 10 times STLC values, and below their respective HBSC values.

Conclusion: The data suggest that the B37-RE-2 stockpiled soil is protective of drinking water and human health. Approval to use this stockpiled soil for backfill at the Site is requested.

4.2.3 B37-RE-3 Stockpile

Analytical data for soil samples associated with the B37-RE-3 stockpile are presented in Table 6 and Table 7. These data are summarized and evaluated below.

Petroleum hydrocarbons: Hot spot sample B37-GS-27 contained the highest TRPH concentration (28,000 mg/kg) and is considered to conservatively represent soil quality in this stockpile. The carbon chain analysis on this sample revealed no detected concentrations of C4 - C12, 4,700 mg/kg (C13 - C22), and 5,200 mg/kg (C23+). These hydrocarbon chain concentrations are well below the permissible levels for TRPH.

VOCs: VOCs were not detected in any soil sample associated with the B37-RE-3 stockpile. Furthermore, analytes were not detected in the volatile hydrocarbon chain fraction (C4 - C12).

SVOCs: SVOCs were not detected in any sample analyzed for SVOCs. Furthermore, those hydrocarbon compounds which were reported in the semi-volatile hydrocarbon chain fraction (C13 - C22) are not SVOC compounds of concern which would be reported under EPA Method 8270.

PCBs: Stockpile sample B37-RE3-SPCONFA was analyzed for PCBs and none were detected.

Metals: All concentrations were below their respective TTLC and 10 times STLC values, and below their respective HBSC values.

Conclusion: The data suggest that the B37-RE-3 stockpiled soil is protective of drinking water and human health. Approval to use this stockpiled soil for backfill at the Site is requested.

4.2.4 B37-RE-4 Stockpile

Analytical data for soil samples associated with the B37-RE-4 stockpiles are presented in Table 8, Table 9, and Table 10. These data are summarized and evaluated below.

Petroleum hydrocarbons: Hot spot sample B37-GS-45-3' contained the highest TRPH concentration (24,000 mg/kg) and is considered to conservatively represent soil quality in this stockpile. The carbon chain analysis on this sample revealed 590 mg/kg (C4 - C12), 970 mg/kg (C13 - C22), and 570 mg/kg (C23+). These hydrocarbon chain concentrations are well below the permissible levels for TRPH.

VOCs: All concentrations of VOCs were below their respective HBSC value. Furthermore, the remaining hydrocarbon compounds which were reported in the volatile hydrocarbon chain fraction (C4 - C12) are not VOC compounds of concern which would be reported under EPA Method 8260.

SVOCs: Sample B37-A13-4 had a benzo(a)pyrene concentration of 1.8 mg/kg exceeding the benzo(a)pyrene HBSC of 1.14 mg/kg.

PCBs: Sample B37-RE4-SPCONFA was analyzed for PCBs and 0.057 mg/kg were detected. The reported concentration was more than an order of magnitude below the HBSC for Aroclor 1254.

Metals: All concentrations were below their respective TTLC, 10 times STLC, and STLC values (when analyzed by the waste extraction test), and below their respective HBSC values.

Conclusion: Sample B37-A13-4 exceeded the benzo(a)pyrene HBSC. Consequently, all stockpiled soil associated with this sample will be removed and disposed off-site by a licensed waste hauler. The data suggest that the remaining B37-RE-4 stockpiled soil is protective of drinking water and human health. Approval to use this remaining stockpiled soil for backfill at the Site is requested.

4.2.5 Volcano Project Soil Stockpile

Analytical data for soil samples associated with the volcano project soil stockpile are presented in Table 11. These data are summarized and evaluated below.

Petroleum hydrocarbons: Confirmation sample VSS-CONF contained the highest TRPH concentration (850 mg/kg) and is considered to conservatively represent soil quality in this stockpile. A carbon chain analysis was not performed on this sample because the concentration was below the 10,000 mg/kg threshold concentration.

VOCs: VOCs were not detected in any soil sample associated with the volcano project soil stockpile.

SVOCs: The sum total of SVOCs detected in all samples was 1.980 mg/kg comprised of polycyclic aromatic hydrocarbons (PAHs). All concentrations were found to be between 1 and 4 orders of magnitude below their respective HBSC values.

PCBs: PCB analysis was not conducted on the volcano project soil.

Metals: Copper was identified in sample VSS-SP9 at a concentration of 2000 mg/kg exceeding the copper HBSC of 1260 mg/kg, and 10 times STLC. The soluble concentration of copper in this sample was below the STLC. Five additional samples (VSS-SP9A through VSS-SP9E) were collected in the vicinity of sample VSS-SP9 to evaluate the extent of copper at this location, and the resulting concentrations of copper were below their respective TTLC, 10 times STLC, and HBSC values. Based on the nature of the contaminant and the limited distribution in the stockpile soil, it is believed that the entire stockpile would not pose any significant threat to drinking water and human health. Additionally, other metal concentrations were below their respective TTLC, 10 times STLC, and HBSC values.

Conclusion: The data suggest that the volcano project soil is protective of drinking water and human health. Approval to use this stockpiled soil for backfill at the Site is requested.

SECTION 5.0

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Montgomery Watson, Post-Remedial Excavation Confirmation Sample Report, Parcel A, Report No. 1, McDonnell Douglas C-6 Facility, Los Angeles, California, 1997.

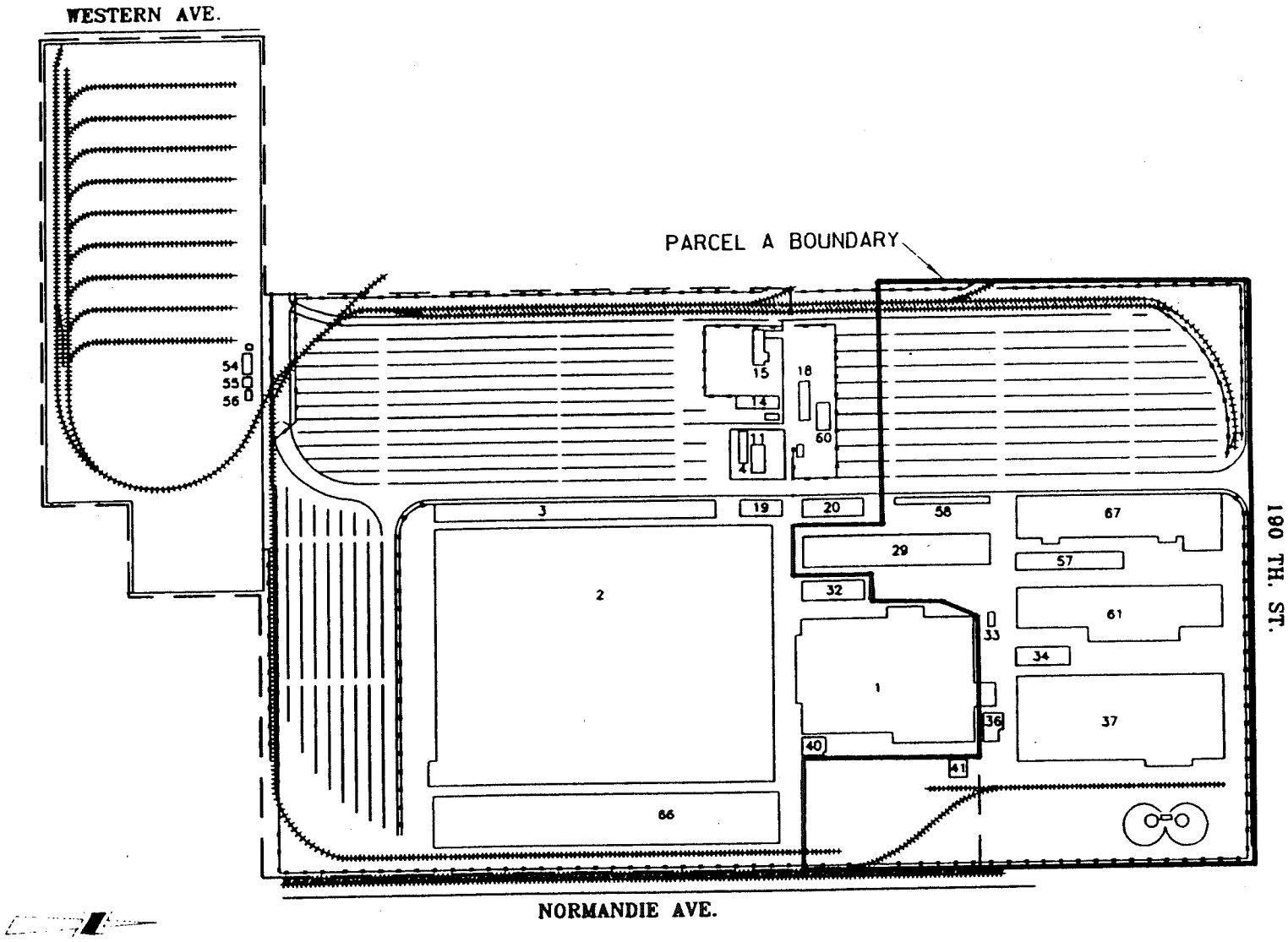
Figures

MONTGOMERY WATSON

MONTGOMERY WATSON

C-6 FACILITY MAP

FIG. 1

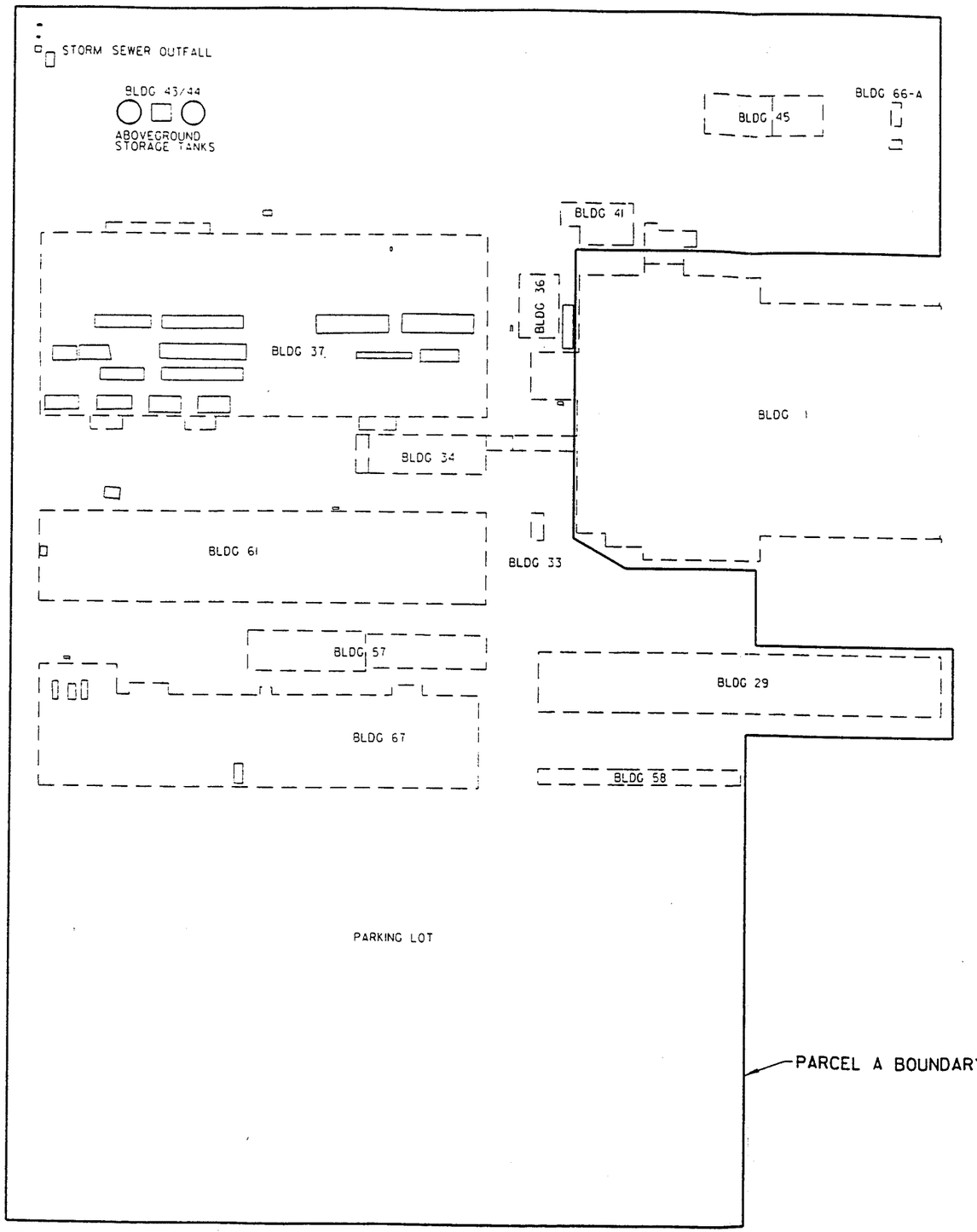


0 600 1200

Approximate Scale: 1"=600'

Base map developed from Facility Layout and Subject Property Map by Kennedy/Jenks Consultants, May 1996.

BOE-C6-0108371



0 40 80 120 160 200
(IN FEET)

BASE MAP DEVELOPED FROM TAIT & ASSOCIATES INC. SURVEY DRAWING DATED 10/22/96.

REV	DATE	BY	DESCRIPTION

SCALE: AS SHOWN

DESIGNED
DRAWN N. CHRAKIAN
CHECKED S. REINERS

SUBMITTED
PROJECT ENGINEER R. C. E. NO. DATE
RECOMMENDED
MONTGOMERY WATSON R. C. E. NO. DATE

MONTGOMERY WATSON
Pasadena California

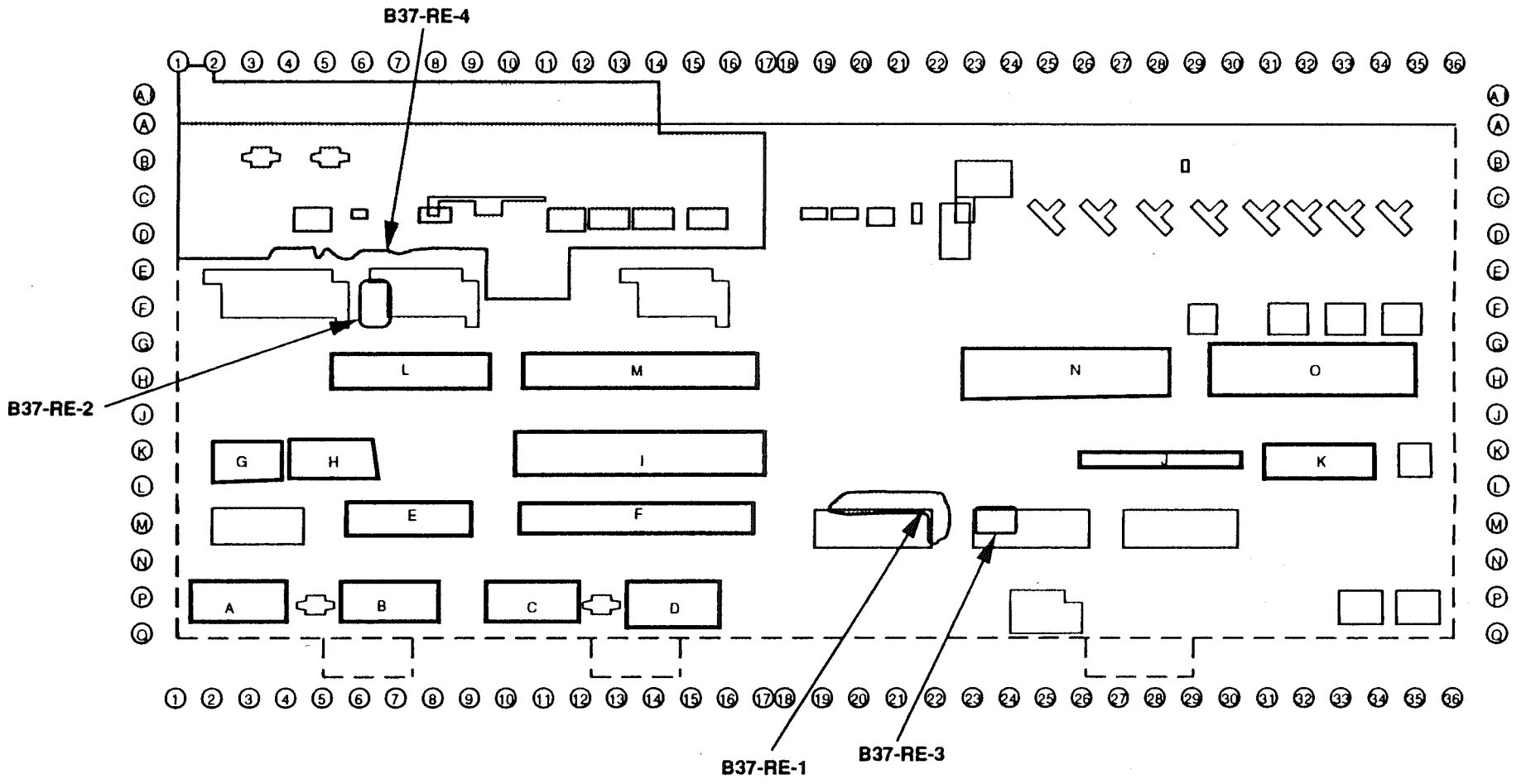
APPROVED 2/5/97 DATE
APPROVED DATE

MCDONNELL DOUGLAS C-6 FACILITY
PARCEL A
SITE MAP

SHEET FIG. 2 OF • SHEETS

JOB NO. • E NO. •

BOE-C6-0110372

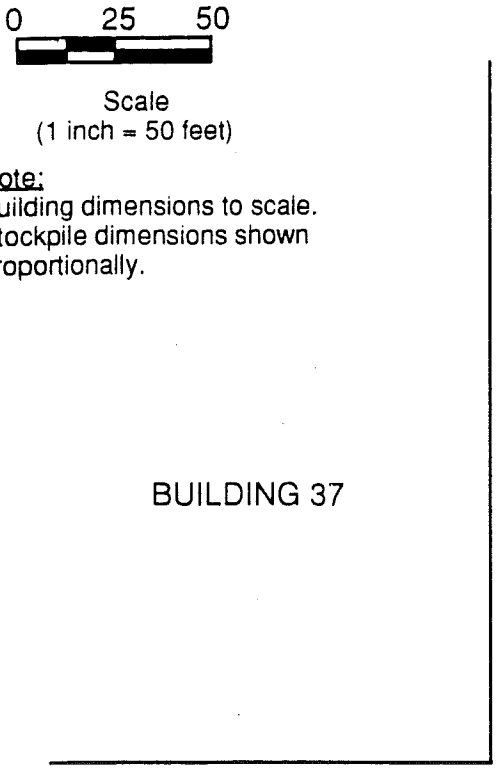


DOUGLAS AIRCRAFT COMPANY
C-6 FACILITY - BUILDING 37

FIGURE 3

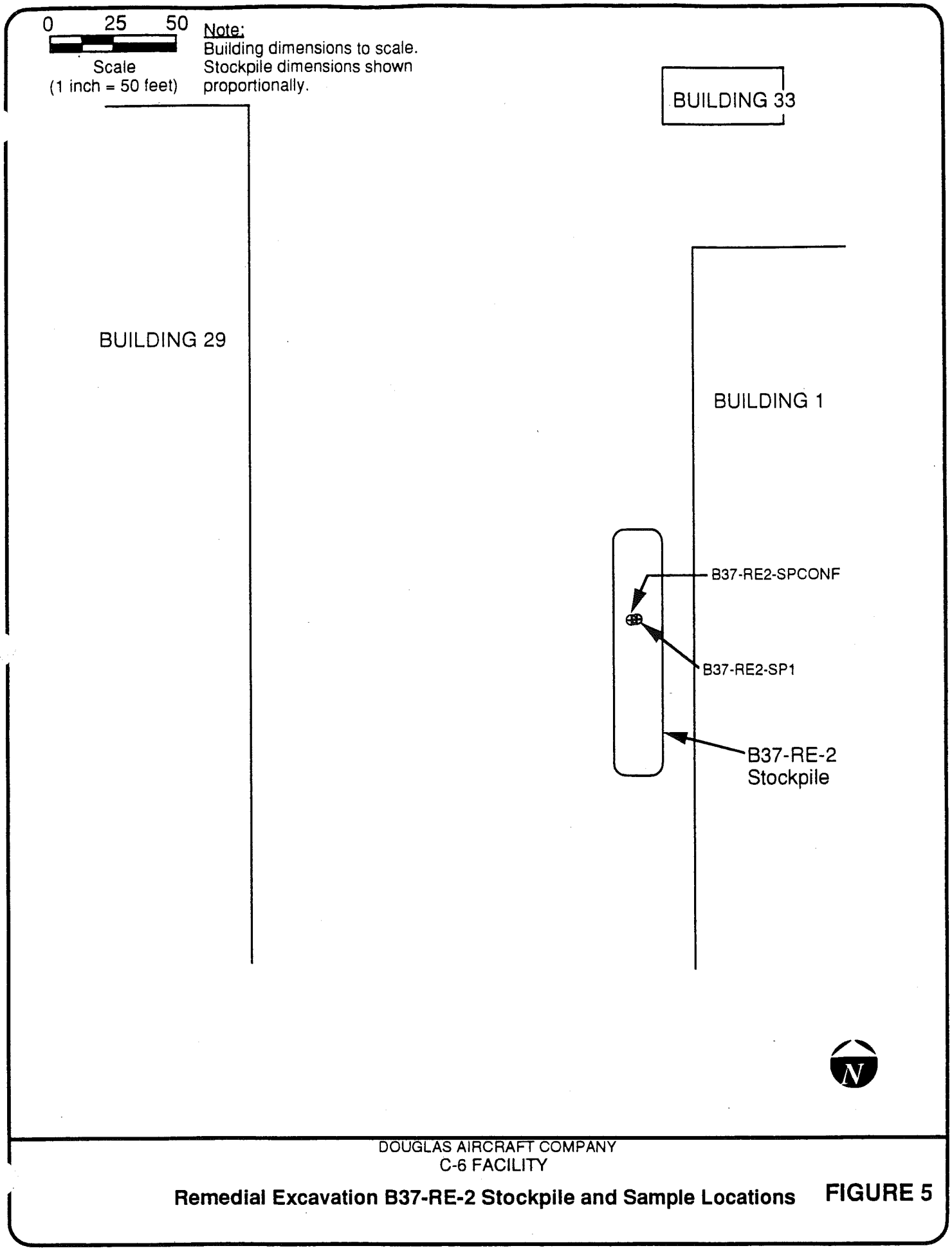
BUILDING 37 GRID OUTLINE AND LOCATIONS OF REMEDIAL EXCAVATIONS

BOE-C6-0108373



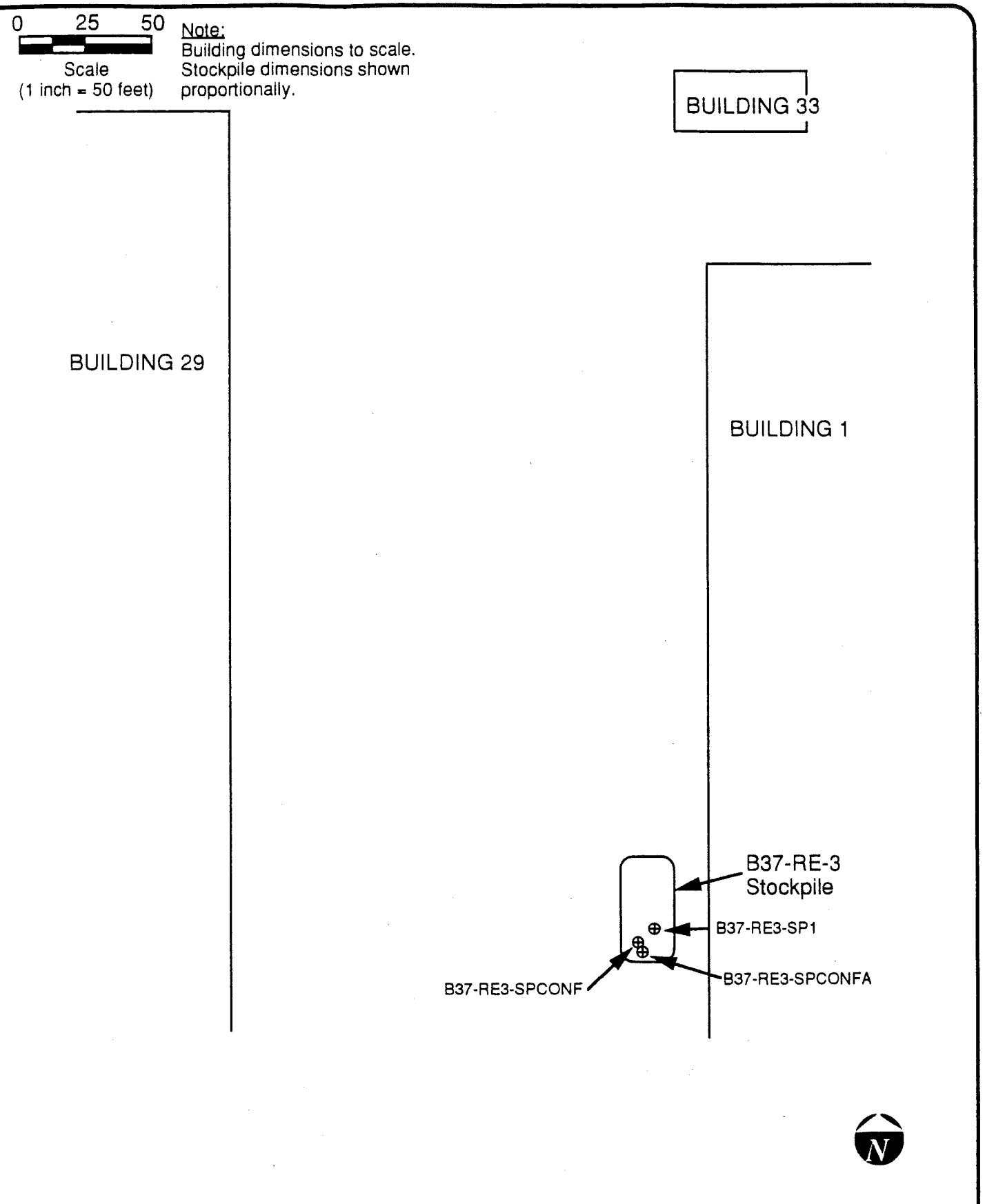
DOUGLAS AIRCRAFT COMPANY
C-6 FACILITY

Remedial Excavation B37-RE-1 Stockpile and Sample Locations **FIGURE 4**



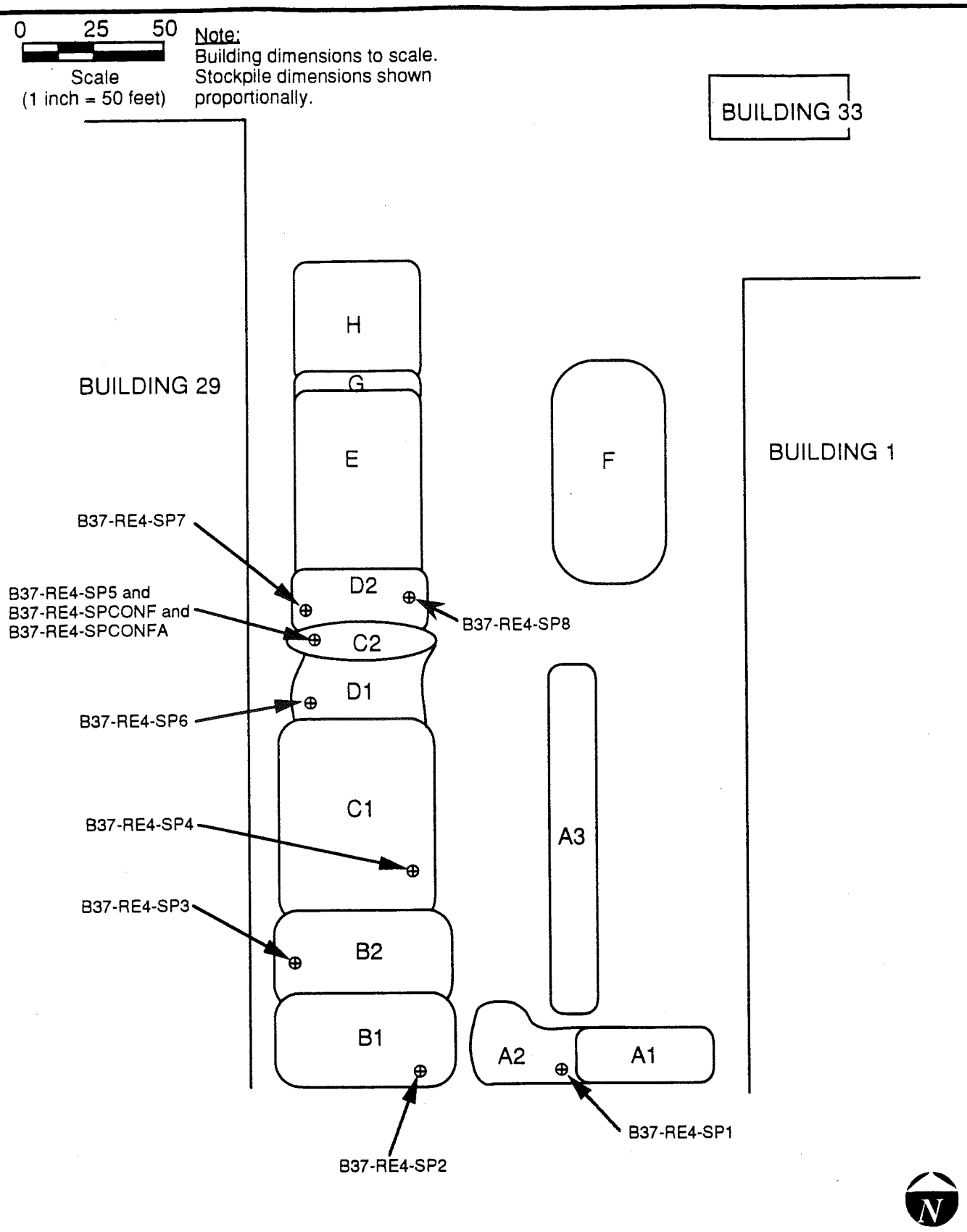
DOUGLAS AIRCRAFT COMPANY
C-6 FACILITY

Remedial Excavation B37-RE-2 Stockpile and Sample Locations **FIGURE 5**



DOUGLAS AIRCRAFT COMPANY
C-6 FACILITY

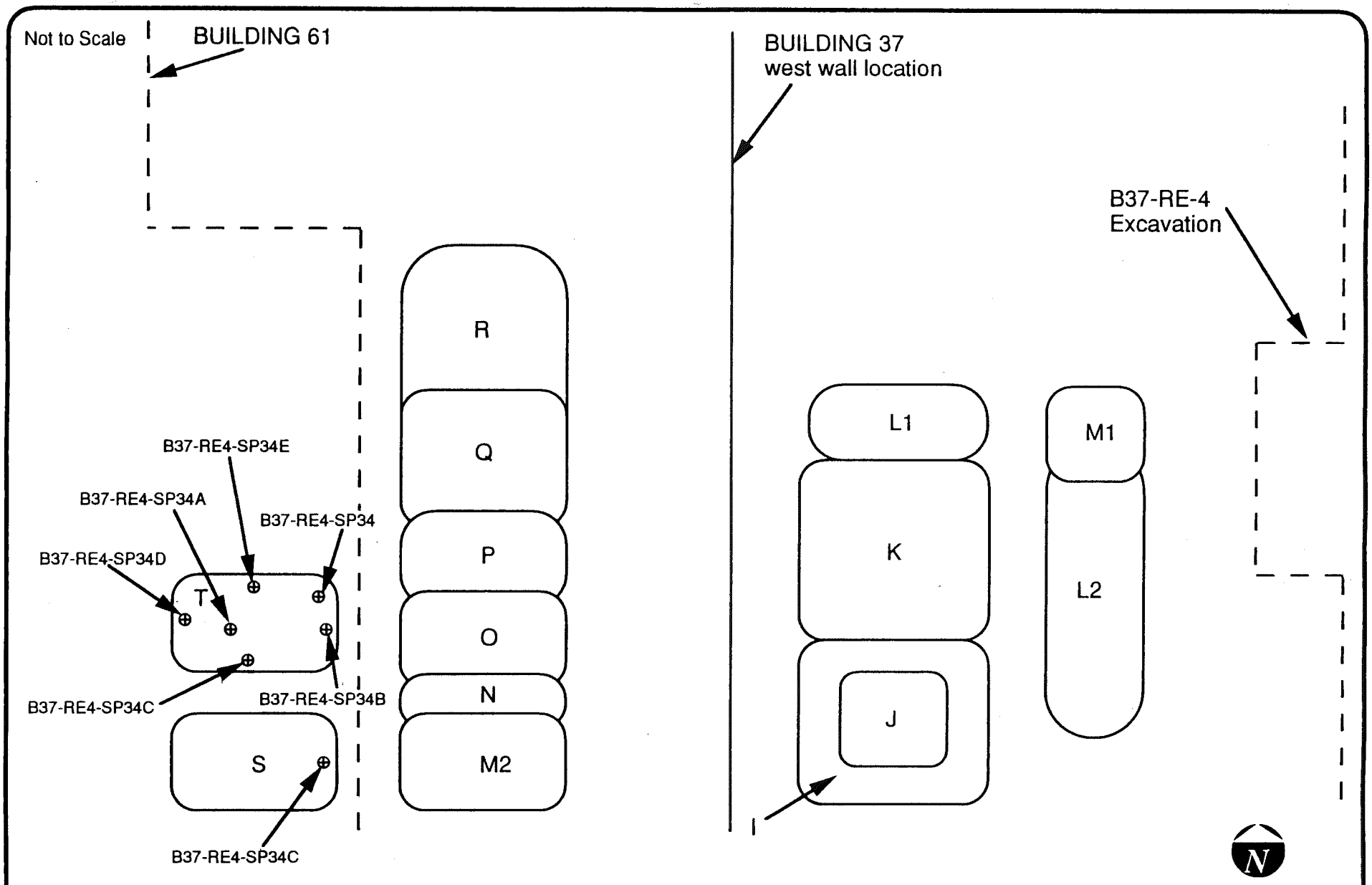
Remedial Excavation B37-RE-3 Stockpile and Sample Locations **FIGURE 6**



DOUGLAS AIRCRAFT COMPANY
C-6 FACILITY

Remedial Excavation B37-RE-4 Stockpiles A1 through H Stockpile and Sample Locations

FIGURE 7

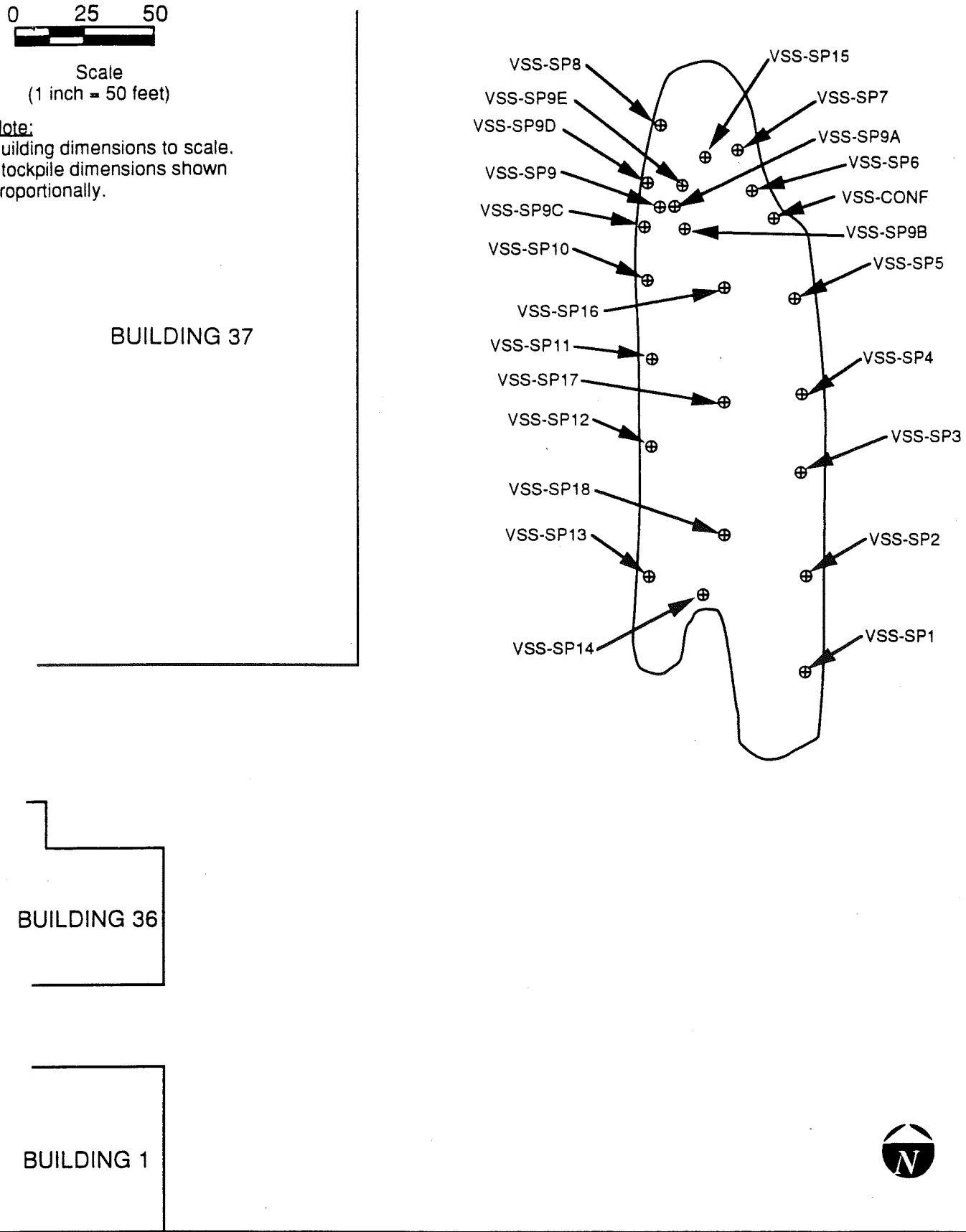


DOUGLAS AIRCRAFT COMPANY
C-6 FACILITY

Remedial Excavation B37-RE-4 Stockpiles I through T
Stockpile and Sample Locations

FIGURE 8

BOE-C6-0108378

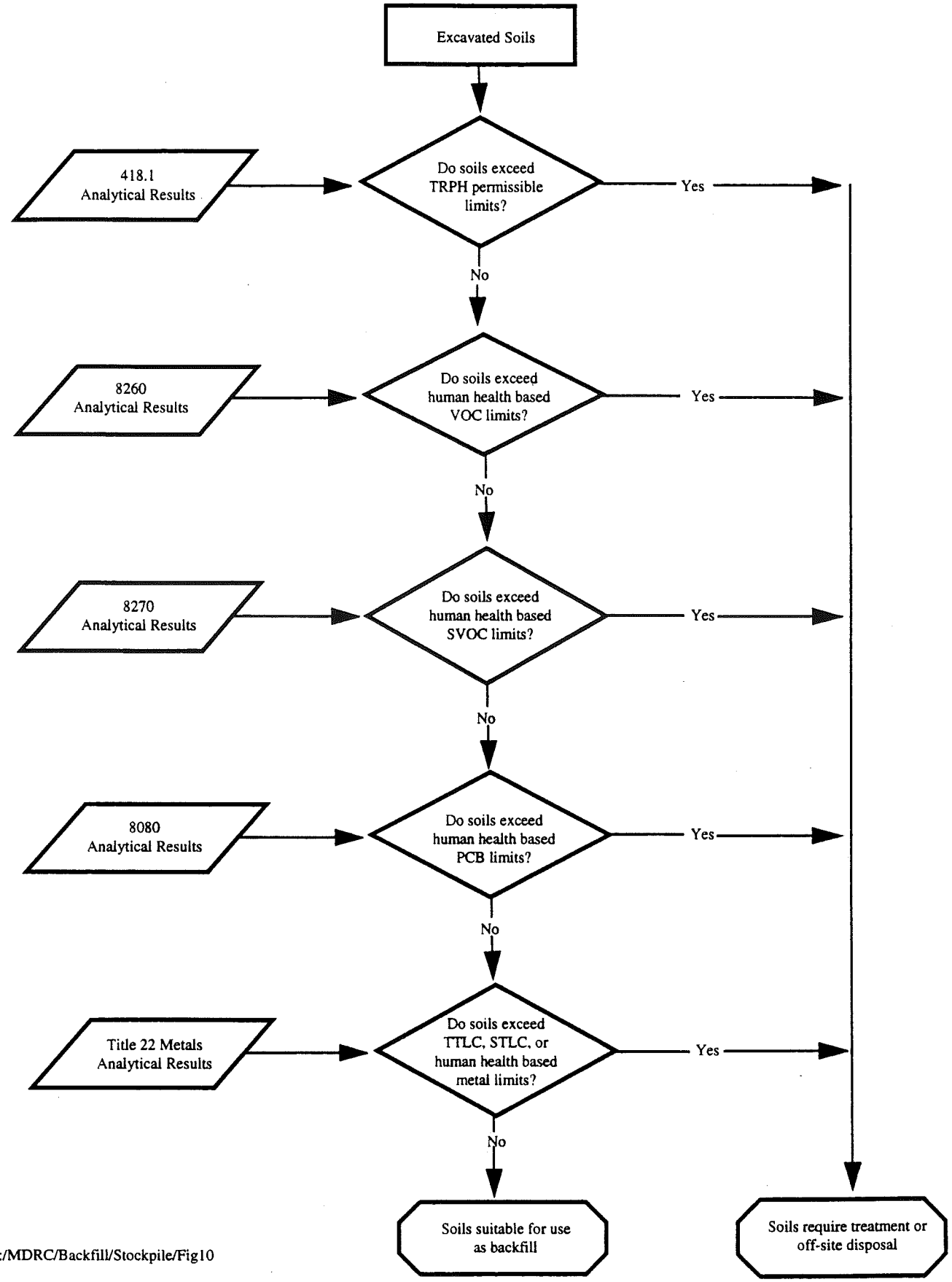


DOUGLAS AIRCRAFT COMPANY
C-6 FACILITY

Volcano Project Soil Stockpile and Sample Locations

FIGURE 9

FIGURE 10
Soil Screening Evaluation Process



g:/MDRC/Backfill/Stockpile/Fig10

Tables

MONTGOMERY WATSON

TABLE 1

Summary of Soil Sample Analytical Methods

Sample Type	EPA Method	Analyte
Grid Sample	418.1	TRPH (a)
	6000/7000	Metals
	8260	VOCs
	8270	SVOCs
Hot Spot Sample	418.1	TRPH (a)
	6000/7000	Metals
	8260	VOCs (b)
	8270	SVOCs (b)
Stockpile Sample	418.1	TRPH (a)
	6000/7000	Metals
	8260	VOCs
	8270	SVOCs
	8080	PCBs (c)
Volcano Site Soil Stockpile Sample	418.1	TRPH (a)
	6000/7000	Metals
	8260	VOCs
	8270	SVOCs

Notes:
TRPH Total Recoverable Petroleum Hydrocarbons
VOCs Volatile Organic Compounds
SVOCs Semi-volatile Organic Compounds.
PCBs Polychlorinated Biphenyls
(a) Samples exhibiting TRPH concentration greater than 10,000 mg/kg were submitted for carbon chain analysis.
(b) Only the sample with highest TRPH concentration from a hot spot area was analyzed for VOCs and SVOCs.
(c) Stockpile confirmation samples only designated B37-RE#-SPCONFA.

TABLE 2
Analytical Data Summary
Remedial Excavation B37-RE-1 Stockpile and Confirmation Samples*

Analyte	EPA Method	Sample Number and Collection Date: B37-RE1-SP1 3/7/97	Sample Number and Collection Date: B37-RE1-SPCONF 3/25/97	Regulatory Levels: TTLC (mg/kg)	Regulatory Levels: 10X STLC (mg/L)
TRPH (mg/kg)	418.1	200	1,800		
Title 22 Metals (mg/kg)					
Antimony	6010	<0.500	<5.0	500	150
Arsenic	6010	<0.11	<1.0	500	50
Barium	6010	304	110	10,000	1,000
Beryllium	6010	<0.06	<0.1	75	7.5
Cadmium	6010	0.38	<0.1	100	10
Chromium (VI)	7196	--	<0.5	500	50
Chromium (total)	6010	19.6	24	2,500	50
Cobalt	6010	6.05	6.9	8,000	800
Copper	6010	13.8	15	2,500	250
Lead (total)	6010	25.6	<1.0	1,000	50
Mercury	7471	<0.200	<0.01	20	2
Molybdenum	6010	<2.50	<0.5	3,500	3,500
Nickel	6010	10.1	13	2,000	200
Selenium	6010	<5.00	<1.0	100	10
Silver	6010	<5.00	<0.1	500	50
Thallium	6010	<0.500	<5.0	700	70
Vanadium	6010	26	26	2,400	240
Zinc	6010	187	67	5,000	2,500
VOCs (1) (mg/kg)					
1,1-Dichloroethane	8260	<0.005	<0.0025		
Tetrachloroethene	8260	<0.005	<0.0025		
1,3,5-Trimethylbenzene	8260	<0.005	<0.0025		
1,2,4-Trimethylbenzene	8260	<0.005	<0.0025		
Naphthalene	8260	<0.005	<0.0025		
p-Isopropyltoluene	8260	<0.005	<0.0025		
m,p-xylene	8260	<0.005	--		
Total xylenes	8260	--	<0.0025		
SVOCs (1) (mg/kg)					
Benzo (a) Anthracene	8270	0.560	<0.800		
Benzo (b) Fluoranthene	8270	0.670	<2.000		
Benzo (k) Fluoranthene	8270	0.460	<2.000		
Benzo (a) Pyrene	8270	0.590	<2.000		
Benzo (g,h,i) Perylene	8270	0.550	<2.000		
4-Chlorophenyl phenyl ether	8270	<0.330	<0.800		
Chrysene	8270	0.570	<0.800		
bis (2-Ethylhexyl)Phthalate	8270	1.300	1.000		
Fluoranthene	8270	0.780	<0.800		
Indeno (1,2,3-cd)Pyrene	8270	0.450	<2.000		
2-Methylnaphthalene	8270	<0.330	<0.800		
Phenanthrene	8270	<0.330	<0.800		
Pyrene	8270	0.560	<0.800		
Carbon Chain Range (mg/kg)	sim. dist.	--	--		

mg/kg = milligrams per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation

VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons

(1) VOCs and SVOCs not listed were not detected
TTLC = California Total Threshold Limit Concentration
SPCONF - Stockpile Confirmation Sample
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figure 4 for sample locations

TABLE 3
Analytical Data Summary
Remedial Excavation B37-RE-1 Hot Spot Samples

Analyte	EPA Method	Sample Number, Collection Date, Grid Location and Depth: B37-GS-4A 1/20/97 M-22 @ 1.5' bgs*	B37-GS-4B 1/20/97 M-22 @ 1.5' bgs*	Regulatory Levels: TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	30,600	23,200		
Title 22 Metals (mg/kg)					
Antimony	6010	<0.500	--	500	150
Arsenic	6010	<0.11	--	500	50
Barium	6010	46.1	--	10,000	1,000
Beryllium	6010	<0.06	--	75	7.5
Cadmium	6010	2.88	--	100	10
Chromium (VI)	7196	--	--	500	50
Chromium (total)	6010	17.0	--	2,500	50
Cobalt	6010	17.3	--	8,000	800
Copper	6010	15.2	--	2,500	250
Lead (total)	6010	3.30	--	1,000	50
Mercury	7471	<0.200	--	20	2
Molybdenum	6010	6.97	--	3,500	3,500
Nickel	6010	21.0	--	2,000	200
Selenium	6010	<5.00	--	100	10
Silver	6010	<5.00	--	500	50
Thallium	6010	1.37	--	700	70
Vanadium	6010	23.8	--	2,400	240
Zinc	6010	139	--	5,000	2,500
VOCs (1) (mg/kg)					
1,1-Dichloroethane	8260	0.0053	--		
Tetrachloroethene	8260	<0.005	--		
1,3,5-Trimethylbenzene	8260	<0.005	--		
1,2,4-Trimethylbenzene	8260	<0.005	--		
Naphthalene	8260	<0.005	--		
p-Isopropyltoluene	8260	<0.005	--		
m,p-xylene	8260	<0.005	--		
Total xylenes	8260	--	--		
SVOCs (1) (mg/kg)	8270	--	--		
Carbon Chain Range (mg/kg)					
C08-C09	sim. dist.	<100	--		
C10-C11	sim. dist.	53	--		
C12-C13	sim. dist.	1,600	--		
C14-C15	sim. dist.	650	--		
C16-C17	sim. dist.	420	--		
C18-C19	sim. dist.	1,100	--		
C20-C23	sim. dist.	5,600	--		
C24-C27	sim. dist.	9,500	--		
C28-C31	sim. dist.	10,300	--		
C32-C35	sim. dist.	7,800	--		
C36-C39	sim. dist.	240	--		
C40+	sim. dist.	1,700	--		

mg/kg = milligrams per kilogram
mg/L = milligrams per liter
-- = not analyzed
bgs = below ground surface
sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
(1) VOCs and SVOCs not listed were not detected
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figure 3 for sample locations

TABLE 4
Analytical Data Summary
Remedial Excavation B37-RE-2 Stockpile and Confirmation Samples*

Analyte	EPA Method	Sample Number and Collection Date: B37-RE2-SP1 3/7/97	Sample Number and Collection Date: B37-RE2-SPCONF 3/25/97	Regulatory Levels: TTLC (mg/kg)	Regulatory Levels: 10X STLC (mg/L)
TRPH (mg/kg)	418.1	160	30		
Title 22 Metals (mg/kg)					
Antimony	6010	<0.500	<5.0	500	150
Arsenic	6010	<0.11	<1.0	500	50
Barium	6010	77.5	100	10,000	1,000
Beryllium	6010	<0.06	<0.1	75	7.5
Cadmium	6010	0.17	<0.1	100	10
Chromium (VI)	7196	--	<0.5	500	50
Chromium (total)	6010	13.6	23	2,500	50
Cobalt	6010	6.35	6.2	8,000	800
Copper	6010	10.8	9.3	2,500	250
Lead (total)	6010	5.35	<1.0	1,000	50
Mercury	7471	<0.200	<0.01	20	2
Molybdenum	6010	<2.50	<0.5	3,500	3,500
Nickel	6010	7.99	8.8	2,000	200
Selenium	6010	<5.00	<1.0	100	10
Silver	6010	<5.00	<0.1	500	50
Thallium	6010	<0.500	<5.0	700	70
Vanadium	6010	23.9	26	2,400	240
Zinc	6010	37.5	37	5,000	2,500
VOCs (1) (mg/kg)					
1,1-Dichloroethane	8260	<0.005	<0.0025		
Tetrachloroethene	8260	<0.005	<0.0025		
1,3,5-Trimethylbenzene	8260	<0.005	<0.0025		
1,2,4-Trimethylbenzene	8260	<0.005	<0.0025		
Naphthalene	8260	<0.005	<0.0025		
p-Isopropyltoluene	8260	<0.005	<0.0025		
m,p-xylene	8260	<0.005	--		
Total xylenes	8260	--	<0.0025		
SVOCs (1) (mg/kg)					
Benzo (a) Anthracene	8270	<0.330	<0.100		
Benzo (b) Fluoranthene	8270	<0.330	<0.250		
Benzo (k) Fluoranthene	8270	<0.330	<0.250		
Benzo (a) Pyrene	8270	<0.330	<0.250		
Benzo (g,h,i) Perylene	8270	<0.330	<0.250		
4-Chlorophenyl phenyl ether	8270	<0.330	<0.100		
Chrysene	8270	<0.330	<0.100		
bis (2-Ethylhexyl)Phthalate	8270	5.100	1.200		
Fluoranthene	8270	<0.330	<0.100		
Indeno (1,2,3-cd)Pyrene	8270	<0.330	<0.250		
2-Methylnaphthalene	8270	<0.330	<0.100		
Phenanthrene	8270	<0.330	<0.100		
Pyrene	8270	<0.330	<0.100		
Carbon Chain Range (mg/kg)	sim. dist.	--	--		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation

VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons

(1) VOCs and SVOCs not listed were not detected
SPCONF - Stockpile Confirmation Sample
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figure 5 for sample locations

TABLE 5
Analytical Data Summary
Remedial Excavation B37-RE-2 Hot Spot Samples

Analyte	EPA Method	Sample Number, Collection Date, Grid Location and Depth B37-GS-33 2/14/97 F-6.5 @ 0.5' bgs*	Regulatory Levels TTLC (mg/kg)	 10X STLC (mg/L)
TRPH (mg/kg)	418.1	9,900		
Title 22 Metals (mg/kg)				
Antimony	6010	<0.500	500	150
Arsenic	6010	<0.11	500	50
Barium	6010	52.5	10,000	1,000
Beryllium	6010	<0.06	75	7.5
Cadmium	6010	<0.05	100	10
Chromium (VI)	7196	--	500	50
Chromium (total)	6010	7.02	2,500	50
Cobalt	6010	3.41	8,000	800
Copper	6010	7.42	2,500	250
Lead (total)	6010	3.14	1,000	50
Mercury	7471	<0.200	20	2
Molybdenum	6010	<2.50	3,500	3,500
Nickel	6010	5.09	2,000	200
Selenium	6010	<5.00	100	10
Silver	6010	<5.00	500	50
Thallium	6010	<0.500	700	70
Vanadium	6010	13.6	2,400	240
Zinc	6010	18.7	5,000	2,500
VOCs (1) (mg/kg)				
1,1-Dichloroethane	8260	<0.005		
Tetrachloroethene	8260	<0.005		
1,3,5-Trimethylbenzene	8260	<0.005		
1,2,4-Trimethylbenzene	8260	<0.005		
Naphthalene	8260	<0.005		
p-Isopropyltoluene	8260	<0.005		
m,p-xylene	8260	<0.005		
Total xylenes	8260	--		
SVOCs (1) (mg/kg)				
Benzo (a) Anthracene	8270	<6.600		
Benzo (b) Fluoranthene	8270	<6.600		
Benzo (k) Fluoranthene	8270	<6.600		
Benzo (a) Pyrene	8270	<6.600		
Benzo (g,h,i) Perylene	8270	<6.600		
4-Chlorophenyl phenyl ether	8270	7,500		
Chrysene	8270	<6.600		
bis (2-Ethylhexyl)Phthalate	8270	210,000		
Fluoranthene	8270	<6.600		
Indeno (1,2,3-cd)Pyrene	8270	<6.600		
2-Methylnaphthalene	8270	<6.600		
Phenanthrene	8270	<6.600		
Pyrene	8270	<6.600		
Carbon Chain Range (mg/kg)	sim. dist.	--		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
(1) VOCs and SVOCs not listed were not detected
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration
bgs = below ground surface

* Refer to Figure 3 for sample location

TABLE 6
Analytical Data Summary
Remedial Excavation B37-RE-3 Stockpile and Confirmation Samples*

Analyte	EPA Method	Sample Number and Collection Date			Regulatory Levels	
		B37-RE3-SP1 3/7/97	B37-RE3-SPCONF 3/25/97	B37-RE3-SPCONFA 4/21/97	TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	1,100	96	--		
Title 22 Metals (mg/kg)						
Antimony	6010	<0.500	<5.0	--	500	150
Arsenic	6010	<0.11	<1.0	--	500	50
Barium	6010	129	120	--	10,000	1,000
Beryllium	6010	<0.06	<0.1	--	75	7.5
Cadmium	6010	0.13	<0.1	--	100	10
Chromium (VI)	7196	--	<0.5	--	500	50
Chromium (total)	6010	20.1	21	--	2,500	50
Cobalt	6010	10.6	7.5	--	8,000	800
Copper	6010	19.3	10	--	2,500	250
Lead (total)	6010	17.7	<1.0	--	1,000	50
Mercury	7471	<0.200	<0.01	--	20	2
Molybdenum	6010	<2.50	<0.5	--	3,500	3,500
Nickel	6010	14.3	8.2	--	2,000	200
Selenium	6010	<5.00	<1.0	--	100	10
Silver	6010	<5.00	<0.1	--	500	50
Thallium	6010	<0.500	<5.0	--	700	70
Vanadium	6010	43.0	23	--	2,400	240
Zinc	6010	74.1	40	--	5,000	2,500
VOCs (1) (mg/kg)						
1,1-Dichloroethane	8260	<0.005	<0.0025	--		
Tetrachloroethene	8260	<0.005	<0.0025	--		
1,3,5-Trimethylbenzene	8260	<0.005	<0.0025	--		
1,2,4-Trimethylbenzene	8260	<0.005	<0.0025	--		
Naphthalene	8260	<0.005	<0.0025	--		
p-Isopropyltoluene	8260	<0.005	<0.0025	--		
m,p-xylene	8260	<0.005	--	--		
Total xylenes	8260	--	<0.0025	--		
SVOCs (1) (mg/kg)						
Benzo (a) Anthracene	8270	<0.330	<0.100	--		
Benzo (b) Fluoranthene	8270	<0.330	<0.250	--		
Benzo (k) Fluoranthene	8270	<0.330	<0.250	--		
Benzo (a) Pyrene	8270	<0.330	<0.250	--		
Benzo (g,h,i) Perylene	8270	<0.330	<0.250	--		
4-Chlorophenyl phenyl ether	8270	<0.330	<0.100	--		
Chrysene	8270	<0.330	<0.100	--		
bis (2-Ethylhexyl)Phthalate	8270	<0.330	<0.100	--		
Fluoranthene	8270	<0.330	<0.100	--		
Indeno (1,2,3-cd)Pyrene	8270	<0.330	<0.250	--		
2-Methylnaphthalene	8270	<0.330	<0.100	--		
Phenanthrene	8270	<0.330	<0.100	--		
Pyrene	8270	<0.330	<0.100	--		
Carbon Chain Range (mg/kg)	sim. dist.	--	--	--		
PCBs (mg/kg)	8080	--	--	ND		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim dist. = simulated distillation
ND = not detected

VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
PCBs = Polychlorinated biphenyls

(1) VOCs and SVOCs not listed were not detected
SPCONF - Stockpile Confirmation Sample
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figure 6 for sample locations

TABLE 7
Analytical Data Summary
Remedial Excavation B37-RE-3 Hot Spot Samples

Analyte	EPA Method	Sample Number, Collection Date, Grid Location and Depth B37-GS-27 2/11/97 M-23.5 @ 3.0' bgs*	Regulatory Levels TTLC (mg/kg)	 10X STLC (mg/L)
TRPH (mg/kg)	418.1	28,000		
Title 22 Metals (mg/kg)				
Antimony	6010	<0.500	500	150
Arsenic	6010	<0.11	500	50
Barium	6010	81.7	10,000	1,000
Beryllium	6010	<0.06	75	7.5
Cadmium	6010	<0.05	100	10
Chromium (VI)	7196	--	500	50
Chromium (total)	6010	12.7	2,500	50
Cobalt	6010	7.35	8,000	800
Copper	6010	11.8	2,500	250
Lead (total)	6010	4.07	1,000	50
Mercury	7471	<0.200	20	2
Molybdenum	6010	<2.50	3,500	3,500
Nickel	6010	8.52	2,000	200
Selenium	6010	<5.00	100	10
Silver	6010	<5.00	500	50
Thallium	6010	<0.500	700	70
Vanadium	6010	29.4	2,400	240
Zinc	6010	33.4	5,000	2,500
VOCs (1) (mg/kg)				
1,1-Dichloroethane	8260	<0.005		
Tetrachloroethene	8260	<0.005		
1,3,5-Trimethylbenzene	8260	<0.005		
1,2,4-Trimethylbenzene	8260	<0.005		
Naphthalene	8260	<0.005		
p-Isopropyltoluene	8260	<0.005		
m,p-xylene	8260	<0.005		
Total xylenes	8260	--		
SVOCs (1) (mg/kg)	8270	--		
Benzo (a) Anthracene	8270	--		
Benzo (b) Fluoranthene	8270	--		
Benzo (k) Fluoranthene	8270	--		
Benzo (a) Pyrene	8270	--		
Benzo (g,h,i) Perylene	8270	--		
4-Chlorophenyl phenyl ether	8270	--		
Chrysene	8270	--		
bis (2-Ethylhexyl)Phthalate	8270	--		
Fluoranthene	8270	--		
Indeno (1,2,3-cd)Pyrene	8270	--		
2-Methylnaphthalene	8270	--		
Phenanthrene	8270	--		
Pyrene	8270	--		
Carbon Chain Range (mg/kg)				
C08-C09	sim. dist.	<200		
C10-C11	sim. dist.	<200		
C12-C13	sim. dist.	<200		
C14-C15	sim. dist	<200		
C16-C17	sim. dist.	790		
C18-C19	sim. dist.	1,800		
C20-C23	sim. dist	4,700		
C24-C27	sim. dist	5,200		
C28-C31	sim. dist	4,400		
C32-C35	sim. dist	2,700		
C36-C39	sim. dist	1,900		
C40+	sim. dist.	<200		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation
bgs = below ground surface

VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
(1) VOCs and SVOCs not listed were not detected
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figure 3 for sample location

TABLE 8
Analytical Data Summary
Remedial Excavation B37-RE-4 Stockpile and Confirmation Samples*

Analyte	EPA Method	Sample Number and Collection Date B37-RE4-SP1 3/7/97	B37-RE4-SP2 3/7/97	B37-RE4-SP3 3/7/97	B37-RE4-SP4 3/7/97	B37-RE4-SP5 3/7/97	Regulatory Levels TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	1,200	660	280	150	1,200		
Title 22 Metals (mg/kg)								
Antimony	6010	<0.500	<0.500	<0.500	<0.500	<0.500	500	150
Arsenic	6010	<0.11	<0.11	<0.11	<0.11	<0.11	500	50
Barium	6010	104	103	136	158	116	10,000	1,000
Beryllium	6010	<0.06	<0.06	<0.06	<0.06	<0.06	75	7.5
Cadmium	6010	0.13	<0.05	0.21	0.39	0.25	100	10
Chromium (VI)	7196	--	--	--	--	--	500	50
Chromium (total)	6010	22.8	17.5	23.2	19.2	19.4	2,500	50
Cobalt	6010	8.25	9.66	11.5	13.5	10.7	8,000	800
Copper	6010	19.9	23.8	28.6	23.9	21.0	2,500	250
Lead (total)	6010	8.93	6.73	7.04	7.10	8.26	1,000	50
Mercury	7471	<0.200	<0.200	<0.200	<0.200	<0.200	20	2
Molybdenum	6010	<2.50	<2.50	<2.50	<2.50	<2.50	3,500	3,500
Nickel	6010	11.5	12.3	13.9	12.2	13.7	2,000	200
Selenium	6010	<5.00	<5.00	<5.00	<5.00	<5.00	100	10
Silver	6010	<5.00	<5.00	<5.00	<5.00	<5.00	500	50
Thallium	6010	<0.500	<0.500	<0.500	<0.500	<0.500	700	70
Vanadium	6010	33.8	36.2	40.6	38.0	37.7	2,400	240
Zinc	6010	61.9	56.7	83.5	72.6	75.1	5,000	2,500
VOCs (1) (mg/kg)								
1,1-Dichloroethane	8260	<0.005	<0.005	<0.005	<0.005	<0.005		
Tetrachloroethene	8260	<0.005	<0.005	<0.005	<0.005	<0.005		
1,3,5-Trimethylbenzene	8260	<0.005	<0.005	<0.005	<0.005	<0.005		
1,2,4-Trimethylbenzene	8260	<0.005	<0.005	<0.005	<0.005	<0.005		
Naphthalene	8260	<0.005	<0.005	<0.005	<0.005	<0.005		
p-Isopropyltoluene	8260	<0.005	<0.005	<0.005	<0.005	<0.005		
m,p-xylene	8260	<0.005	<0.005	<0.005	<0.005	<0.005		
Total xylenes	8260	--	--	--	--	--		
SVOCs (1) (mg/kg)								
Acenaphthene	8270	<0.330	<0.330	<0.330	<0.330	<0.330		
Anthracene	8270	<0.330	<0.330	<0.330	<0.330	<0.330		
Benzo (a) Anthracene	8270	<0.330	<0.330	0.400	<0.330	<0.330		
Benzo (b) Fluoranthene	8270	0.350	<0.330	0.460	<0.330	<0.330		
Benzo (k) Fluoranthene	8270	<0.330	<0.330	0.390	<0.330	<0.330		
Benzo (a) Pyrene	8270	<0.330	<0.330	0.460	<0.330	<0.330		
Benzo (g,h,i) Perylene	8270	0.400	<0.330	0.430	<0.330	<0.330		
4-Chlorophenyl phenyl ether	8270	<0.330	<0.330	0.480	<0.330	<0.330		
Chrysene	8270	0.360	<0.330	0.480	<0.330	<0.330		
Dibenz (a,h) Anthracene	8270	<0.330	<0.330	<0.330	<0.330	<0.330		
bis (2-Ethylhexyl)Phthalate	8270	1.200	<0.330	<0.330	<0.330	0.460		
Fluoranthene	8270	0.430	<0.330	0.570	<0.330	<0.330		
Fluorene	8270	<0.330	<0.330	<0.330	<0.330	<0.330		
Indeno (1,2,3-cd)Pyrene	8270	<0.330	<0.330	0.360	<0.330	<0.330		
2-Methylnaphthalene	8270	<0.330	<0.330	<0.330	<0.330	<0.330		
Phenanthrene	8270	<0.330	<0.330	<0.330	<0.330	<0.330		
Pyrene	8270	<0.330	<0.330	0.350	<0.330	<0.330		
Carbon Chain Range (mg/kg)	sim. dist.	--	--	--	--	--		
PCBs (1) (mg/kg)	8080	--	--	--	--	--		
PCB-1260	8080	--	--	--	--	--		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
PCBs = Polychlorinated biphenyls

(1) VOCs, SVOCs, and PCBs not listed were not detected
SPCONF - Stockpile Confirmation Sample
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figures 7 and 8 for sample locations

TABLE 8
Analytical Data Summary
Remedial Excavation B37-RE-4 Stockpile and Confirmation Samples*

Analyte	EPA Method	Sample Number and Collection Date: B37-RE4-SP6 3/7/97	B37-RE4-SP7 3/7/97	B37-RE4-SP8 3/7/97	B37-RE4-SP9 3/7/97	B37-RE4-SP10 3/7/97	Regulatory Levels: TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	1,100	170	690	<10	420		
Title 22 Metals (mg/kg)								
Antimony	6010	<0.500	<0.500	<0.500	<0.500	<0.500	500	150
Arsenic	6010	<0.11	<0.11	<0.11	<0.11	<0.11	500	50
Barium	6010	131	144	101	112	104	10,000	1,000
Beryllium	6010	<0.06	<0.06	<0.06	<0.06	<0.06	75	7.5
Cadmium	6010	0.36	0.24	0.10	0.38	0.14	100	10
Chromium (VI)	7196	--	--	--	--	--	500	50
Chromium (total)	6010	18.0	18.9	20.7	21.1	15.6	2,500	50
Cobalt	6010	16.4	13.9	8.76	10.3	8.14	8,000	800
Copper	6010	30.2	30.3	17.2	25.5	17.6	2,500	250
Lead (total)	6010	7.59	6.93	7.24	6.65	6.21	1,000	50
Mercury	7471	<0.200	<0.200	<0.200	<0.200	<0.200	20	2
Molybdenum	6010	<2.50	<2.50	<2.50	<2.50	<2.50	3,500	3,500
Nickel	6010	11.8	11.7	10.5	11.8	9.51	2,000	200
Selenium	6010	<5.00	<5.00	<5.00	<5.00	<5.00	100	10
Silver	6010	<5.00	<5.00	<5.00	<5.00	<5.00	500	50
Thallium	6010	<0.500	<0.500	<0.500	<0.500	<0.500	700	70
Vanadium	6010	37	37.6	31.0	39.4	30.9	2,400	240
Zinc	6010	72.8	71.6	64.2	59.8	51.1	5,000	2,500
VOCs (1) (mg/kg)								
1,1-Dichloroethane	8260	<0.005	<0.005	<0.005	<0.005	<0.005		
Tetrachloroethene	8260	<0.005	<0.005	<0.005	<0.005	<0.005		
1,3,5-Trimethylbenzene	8260	<0.005	<0.005	<0.005	<0.005	<0.005		
1,2,4-Trimethylbenzene	8260	<0.005	<0.005	<0.005	<0.005	<0.005		
Naphthalene	8260	<0.005	<0.005	<0.005	<0.005	<0.005		
p-Isopropyltoluene	8260	<0.005	<0.005	<0.005	<0.005	<0.005		
m,p-xylene	8260	<0.005	<0.005	<0.005	<0.005	<0.005		
Total xylenes	8260	--	--	--	--	--		
SVOCs (1) (mg/kg)								
Acenaphthene	8270	<0.330	<0.330	<0.660	<0.330	<0.330		
Anthracene	8270	<0.330	<0.330	<0.660	<0.330	<0.330		
Benzo (a) Anthracene	8270	<0.330	<0.330	<0.660	<0.330	<0.330		
Benzo (b) Fluoranthene	8270	<0.330	<0.330	<0.660	<0.330	<0.330		
Benzo (k) Fluoranthene	8270	<0.330	<0.330	<0.660	<0.330	<0.330		
Benzo (a) Pyrene	8270	<0.330	<0.330	<0.660	<0.330	<0.330		
Benzo (g,h,i) Perylene	8270	<0.330	<0.330	<0.660	<0.330	<0.330		
4-Chlorophenyl phenyl ether	8270	<0.330	<0.330	<0.660	<0.330	<0.330		
Chrysene	8270	<0.330	<0.330	<0.660	<0.330	<0.330		
Dibenz (a,h) Anthracene	8270	<0.330	<0.330	<0.660	<0.330	<0.330		
bis (2-Ethylhexyl)Phthalate	8270	1,100	<0.330	<0.660	<0.330	1,200		
Fluoranthene	8270	<0.330	<0.330	<0.660	<0.330	<0.330		
Fluorene	8270	<0.330	<0.330	<0.660	<0.330	<0.330		
Indeno (1,2,3-cd)Pyrene	8270	<0.330	<0.330	<0.660	<0.330	<0.330		
2-Methylnaphthalene	8270	<0.330	<0.330	<0.660	<0.330	<0.330		
Phenanthrene	8270	<0.330	<0.330	<0.660	<0.330	<0.330		
Pyrene	8270	<0.330	<0.330	<0.660	<0.330	<0.330		
Carbon Chain Range (mg/kg)	sim. dist.	--	--	--	--	--		
PCBs (1) (mg/kg)	8080	--	--	--	--	--		
PCB-1260	8080	--	--	--	--	--		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
PCBs = Polychlorinated biphenyls
(1) VOCs, SVOCs, and PCBs not listed were not detected
SPCONF - Stockpile Confirmation Sample
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figures 7 and 8 for sample locations

TABLE 8
Analytical Data Summary
Remedial Excavation B37-RE-4 Stockpile and Confirmation Samples*

Analyte	EPA Method	Sample Number and Collection Date: B37-RE4-SP11 3/7/97	B37-RE4-SP12 3/11/97	B37-RE4-SP13 3/11/97	B37-RE4-SP14 3/13/97	B37-RE4-SP15 3/14/97	Regulatory Levels: TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	220	100	120	34	76		
Title 22 Metals (mg/kg)								
Antimony	6010	<0.500	<5.0	<5.0	<5.0	<5.0	500	150
Arsenic	6010	<0.11	<1.0	<1.0	<1.0	<1.0	500	50
Barium	6010	98.6	120	150	140	150	10,000	1,000
Beryllium	6010	<0.06	<0.1	<0.1	<0.1	<0.1	75	7.5
Cadmium	6010	0.25	<0.1	<0.1	<0.1	<0.1	100	10
Chromium (VI)	7196	--	<0.5	<0.5	<0.5	<0.5	500	50
Chromium (total)	6010	22.8	27	25	25	24	2,500	50
Cobalt	6010	7.64	8.9	11	11	8.4	8,000	800
Copper	6010	18.0	15	16	11	11	2,500	250
Lead (total)	6010	8.38	<1.0	<1.0	<1.0	<1.0	1,000	50
Mercury	7471	<0.200	<0.01	<0.01	<0.01	<0.01	20	2
Molybdenum	6010	<2.50	<0.5	<0.5	<0.5	<0.5	3,500	3,500
Nickel	6010	10.4	11	10	8.4	8.1	2,000	200
Selenium	6010	<5.00	<1.0	<1.0	<1.0	<1.0	100	10
Silver	6010	<5.00	<0.1	<0.1	<0.1	<0.1	500	50
Thallium	6010	<0.500	<5.0	<5.0	<5.0	<5.0	700	70
Vanadium	6010	29.7	30	26	27	25	2,400	240
Zinc	6010	54.5	45	62	48	47	5,000	2,500
VOCs (1) (mg/kg)								
1,1-Dichloroethane	8260	<0.005	<0.0025	<0.0025	<0.0025	<0.0025		
Tetrachloroethene	8260	<0.005	<0.0025	<0.0025	<0.0025	<0.0025		
1,3,5-Trimethylbenzene	8260	<0.005	<0.0025	<0.0025	<0.0025	<0.0025		
1,2,4-Trimethylbenzene	8260	<0.005	<0.0025	<0.0025	<0.0025	<0.0025		
Naphthalene	8260	<0.005	<0.0025	<0.0025	<0.0025	<0.0025		
p-Isopropyltoluene	8260	<0.005	<0.0025	<0.0025	<0.0025	<0.0025		
m,p-xylene	8260	<0.005	--	--	--	--		
Total xylenes	8260	--	<0.0025	<0.0025	<0.0025	<0.0025		
SVOCs (1) (mg/kg)								
Acenaphthene	8270	<0.330	<0.100	<0.100	<0.100	<0.100		
Anthracene	8270	<0.330	<0.100	<0.100	<0.100	<0.100		
Benzo (a) Anthracene	8270	<0.330	<0.100	<0.100	<0.100	<0.100		
Benzo (b) Fluoranthene	8270	<0.330	<0.250	<0.250	<0.250	<0.250		
Benzo (k) Fluoranthene	8270	<0.330	<0.250	<0.250	<0.250	<0.250		
Benzo (a) Pyrene	8270	<0.330	<0.250	<0.250	<0.250	<0.250		
Benzo (g,h,i) Perylene	8270	<0.330	<0.250	<0.250	<0.250	<0.250		
4-Chlorophenyl phenyl ether	8270	<0.330	<0.100	<0.100	<0.100	<0.100		
Chrysene	8270	<0.330	<0.100	<0.100	<0.100	<0.100		
Dibenz (a,h) Anthracene	8270	<0.330	<0.100	<0.100	<0.100	<0.100		
bis (2-Ethylhexyl)Phthalate	8270	<0.330	<0.100	<0.100	<0.100	<0.100		
Fluoranthene	8270	<0.330	<0.100	<0.100	<0.100	<0.100		
Fluorene	8270	<0.330	<0.100	<0.100	<0.100	<0.100		
Indeno (1,2,3-cd)Pyrene	8270	<0.330	<0.250	<0.250	<0.250	<0.250		
2-Methylnaphthalene	8270	<0.330	<0.100	<0.100	<0.100	<0.100		
Phenanthrene	8270	<0.330	<0.100	<0.100	<0.100	<0.100		
Pyrene	8270	<0.330	<0.100	<0.100	<0.100	<0.100		
Carbon Chain Range (mg/kg)	sim. dist.	--	--	--	--	--		
PCBs (1) (mg/kg)	8080	--	--	--	--	--		
PCB-1260	8080	--	--	--	--	--		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
PCBs = Polychlorinated biphenyls

(1) VOCs, SVOCs and PCBs not listed were not detected
SPCONF - Stockpile Confirmation Sample
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figures 7 and 8 for sample locations

TABLE 8
Analytical Data Summary
Remedial Excavation B37-RE-4 Stockpile and Confirmation Samples*

		Sample Number and Collection Date					Regulatory Levels	
Analyte	EPA Method	B37-RE4-SP16 3/14/97	B37-RE4-SP17 3/17/97	B37-RE4-SP18 3/18/97	B37-RE4-SP19 3/18/97	B37-RE4-SP20 3/18/97	TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	160	19	390	90	110		
Title 22 Metals (mg/kg)								
Antimony	6010	<5.0	<5.0	<5.0	<5.0	<5.0	500	150
Arsenic	6010	<1.0	<1.0	<1.0	<1.0	<1.0	500	50
Barium	6010	100	100	120	100	120	10,000	1,000
Beryllium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	75	7.5
Cadmium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	100	10
Chromium (VI)	7196	<0.5	<0.5	<0.5	<0.5	<0.5	500	50
Chromium (total)	6010	26	24	25	22	33	2,500	50
Cobalt	6010	7.5	6.9	8.8	7.7	7.7	8,000	800
Copper	6010	20	15	16	15	18	2,500	250
Lead (total)	6010	<1.0	<1.0	<1.0	<1.0	<1.0	1,000	50
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	20	2
Molybdenum	6010	<0.5	<0.5	<0.5	<0.5	<0.5	3,500	3,500
Nickel	6010	12	10	12	8.7	11	2,000	200
Selenium	6010	<1.0	<1.0	<1.0	<1.0	<1.0	100	10
Silver	6010	<0.1	<0.1	<0.1	<0.1	<0.1	500	50
Thallium	6010	<5.0	<5.0	<5.0	<5.0	<5.0	700	70
Vanadium	6010	27	30	28	27	32	2,400	240
Zinc	6010	62	70	55	59	71	5,000	2,500
VOCs (1) (mg/kg)								
1,1-Dichloroethane	8260	<0.0025	<0.0025	<0.005	<0.0025	<0.0025		
Tetrachloroethene	8260	<0.0025	<0.0025	<0.005	<0.0025	<0.0025		
1,3,5-Trimethylbenzene	8260	<0.0025	<0.0025	<0.005	<0.0025	<0.0025		
1,2,4-Trimethylbenzene	8260	<0.0025	<0.0025	<0.005	<0.0025	<0.0025		
Naphthalene	8260	<0.0025	<0.0025	<0.005	<0.0025	<0.0025		
p-Isopropyltoluene	8260	<0.0025	<0.0025	<0.005	<0.0025	<0.0025		
m,p-xylene	8260	--	--	--	--	--		
Total xylenes	8260	<0.0025	<0.0025	<0.005	<0.0025	<0.0025		
SVOCs (1) (mg/kg)								
Acenaphthene	8270	0.120	<0.100	<0.400	<0.100	<0.100		
Anthracene	8270	<0.100	<0.100	<0.400	<0.100	<0.100		
Benzo (a) Anthracene	8270	0.120	<0.100	<0.400	<0.100	1.400		
Benzo (b) Fluoranthene	8270	<0.250	<0.250	<1.000	<0.250	<0.250		
Benzo (k) Fluoranthene	8270	<0.250	<0.250	<1.000	<0.250	<0.250		
Benzo (a) Pyrene	8270	<0.250	<0.250	<1.000	<0.250	<0.250		
Benzo (g,h,i) Perylene	8270	<0.250	<0.250	<1.000	<0.250	<0.250		
4-Chlorophenyl phenyl ether	8270	<0.100	<0.100	<0.400	<0.100	<0.100		
Chrysene	8270	0.160	0.250	<0.400	<0.100	0.720		
Dibenz (a,h) Anthracene	8270	<0.100	<0.100	<0.400	<0.100	<0.100		
bis (2-Ethylhexyl)Phthalate	8270	<0.100	<0.100	<0.400	<0.100	<0.100		
Fluoranthene	8270	0.150	<0.100	<0.400	<0.100	0.940		
Fluorene	8270	<0.100	<0.100	<0.400	<0.100	<0.100		
Indeno (1,2,3-cd)Pyrene	8270	<0.250	<0.250	<1.000	<0.250	<0.250		
2-Methylnaphthalene	8270	<0.100	<0.100	<0.400	<0.100	<0.100		
Phenanthrene	8270	0.280	<0.100	<0.400	<0.100	<0.100		
Pyrene	8270	0.230	<0.100	<0.400	<0.100	2.000		
Carbon Chain Range (mg/kg)	sim. dist.	--	--	--	--	--		
PCBs (1) (mg/kg)	8080	--	--	--	--	--		
PCB-1260	8080	--	--	--	--	--		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
PCBs = Polychlorinated biphenyls

(1) VOCs, SVOCs, and PCBs not listed were not detected
SPCONF - Stockpile Confirmation Sample
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figures 7 and 8 for sample locations

TABLE 8
Analytical Data Summary
Remedial Excavation B37-RE-4 Stockpile and Confirmation Samples*

Analyte	EPA Method	Sample Number and Collection Date: B37-RE4-SP21 3/19/97	B37-RE4-SP22 3/19/97	B37-RE4-SP23 3/19/97	B37-RE4-SP24 3/20/97	B37-RE4-SP25 3/20/97	Regulatory Levels: TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	38	84	14	11	680		
Title 22 Metals (mg/kg)								
Antimony	6010	<5.0	<5.0	<5.0	<5.0	<5.0	500	150
Arsenic	6010	<1.0	<1.0	<1.0	<1.0	<1.0	500	50
Barium	6010	98	150	110	150	100	10,000	1,000
Beryllium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	75	7.5
Cadmium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	100	10
Chromium (VI)	7196	<0.5	<0.5	<0.5	<0.5	<0.5	500	50
Chromium (total)	6010	33	27	32	29	26	2,500	50
Cobalt	6010	8.1	6.7	7.2	7.2	7.6	8,000	800
Copper	6010	22	15	25	16	17	2,500	250
Lead (total)	6010	<1.0	<1.0	<1.0	9.2	<1.0	1,000	50
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	20	2
Molybdenum	6010	<0.5	<0.5	<0.5	<0.5	<0.5	3,500	3,500
Nickel	6010	11	7.6	14	10	11	2,000	200
Selenium	6010	<1.0	<1.0	<1.0	<1.0	<1.0	100	10
Silver	6010	<0.1	<0.1	<0.1	<0.1	<0.1	500	50
Thallium	6010	<5.0	<5.0	<5.0	<5.0	<5.0	700	70
Vanadium	6010	30	27	29	32	26	2,400	240
Zinc	6010	61	66	59	69	47	5,000	2,500
VOCs (1) (mg/kg)								
1,1-Dichloroethane	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025		
Tetrachloroethene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025		
1,3,5-Trimethylbenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025		
1,2,4-Trimethylbenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025		
Naphthalene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025		
p-Isopropyltoluene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025		
m,p-xylene	8260	--	--	--	--	--		
Total xylenes	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025		
SVOCs (1) (mg/kg)								
Acenaphthene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Anthracene	8270	<0.100	0.130	0.190	<0.100	<0.100		
Benzo (a) Anthracene	8270	0.380	0.590	0.820	<0.100	0.340		
Benzo (b) Fluoranthene	8270	<0.250	1.100	1.800	<0.250	0.600		
Benzo (k) Fluoranthene	8270	<0.250	0.440	0.690	<0.250	0.330		
Benzo (a) Pyrene	8270	<0.250	0.580	0.970	<0.250	0.450		
Benzo (g,h,i) Perylene	8270	<0.250	0.540	1.300	<0.250	0.450		
4-Chlorophenyl phenyl ether	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Chrysene	8270	0.200	1.200	2.200	<0.100	0.680		
Dibenz (a,h) Anthracene	8270	<0.100	<0.100	0.450	<0.100	<0.100		
bis (2-Ethylhexyl)Phthalate	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Fluoranthene	8270	0.120	1.400	1.800	<0.100	0.620		
Fluorene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Indeno (1,2,3-cd)Pyrene	8270	<0.250	0.580	1.100	<0.250	<0.250		
2-Methylnaphthalene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Phenanthrene	8270	<0.100	0.430	0.700	<0.100	0.110		
Pyrene	8270	0.330	1.700	2.600	<0.100	1.300		
Carbon Chain Range (mg/kg)	sim. dist.	--	--	--	--	--		
PCBs (1) (mg/kg)	8080	--	--	--	--	--		
PCB-1260	8080	--	--	--	--	--		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
PCBs = Polychlorinated biphenyls

(1) VOCs, SVOCs, and PCBs not listed were not detected
SPCONF - Stockpile Confirmation Sample
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figures 7 and 8 for sample locations

TABLE 8
Analytical Data Summary
Remedial Excavation B37-RE-4 Stockpile and Confirmation Samples*

Analyte	EPA Method	Sample Number and Collection Date: B37-RE4-SP26 3/21/97	B37-RE4-SP27 3/24/97	B37-RE4-SP28 3/25/97	B37-RE4-SP29 3/26/97	B37-RE4-SP30 3/27/97	Regulatory Levels: TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	<80	11	<80	47	54		
Title 22 Metals (mg/kg)								
Antimony	6010	<5.0	<5.0	<5.0	<5.0	<5.0	500	150
Arsenic	6010	<1.0	<1.0	<1.0	<1.0	<1.0	500	50
Barium	6010	86	120	120	130	130	10,000	1,000
Beryllium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	75	7.5
Cadmium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	100	10
Chromium (VI)	7196	<0.5	<0.5	<0.5	<0.5	<0.5	500	50
Chromium (total)	6010	16	25	24	32	31	2,500	50
Cobalt	6010	5.4	8.7	5.7	7.8	9.4	8,000	800
Copper	6010	9.4	15	12	57	20	2,500	250
Lead (total)	6010	<1.0	<1.0	<1.0	<1.0	<1.0	1,000	50
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	20	2
Molybdenum	6010	<0.5	<0.5	<0.5	<0.5	<0.5	3,500	3,500
Nickel	6010	6.6	9.8	7.7	14	12	2,000	200
Selenium	6010	<1.0	<1.0	<1.0	<1.0	<1.0	100	10
Silver	6010	<0.1	<0.1	<0.1	<0.1	<0.1	500	50
Thallium	6010	<5.0	<5.0	<5.0	<5.0	<5.0	700	70
Vanadium	6010	23	31	24	33	31	2,400	240
Zinc	6010	29	43	55	56	59	5,000	2,500
VOCs (1) (mg/kg)								
1,1-Dichloroethane	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025		
Tetrachloroethene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025		
1,3,5-Trimethylbenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025		
1,2,4-Trimethylbenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025		
Naphthalene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025		
p-Isopropyltoluene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025		
m,p-xylene	8260	--	--	--	--	--		
Total xylenes	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025		
SVOCs (1) (mg/kg)								
Acenaphthene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Anthracene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Benzo (a) Anthracene	8270	<0.100	0.250	<0.100	<0.100	0.800		
Benzo (b) Fluoranthene	8270	<0.250	0.320	<0.250	<0.250	<0.250		
Benzo (k) Fluoranthene	8270	<0.250	<0.250	<0.250	<0.250	<0.250		
Benzo (a) Pyrene	8270	<0.250	<0.250	<0.250	<0.250	<0.250		
Benzo (g,h,i) Perylene	8270	<0.250	<0.250	<0.250	<0.250	<0.250		
4-Chlorophenyl phenyl ether	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Chrysene	8270	<0.100	0.310	<0.100	<0.100	<0.100		
Dibenz (a,h) Anthracene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
bis (2-Ethylhexyl)Phthalate	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Fluoranthene	8270	<0.100	0.300	<0.100	<0.100	0.230		
Fluorene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Indeno (1,2,3-cd)Pyrene	8270	<0.250	<0.250	<0.250	<0.250	<0.250		
2-Methylnaphthalene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Phenanthrene	8270	<0.100	0.120	<0.100	<0.100	0.100		
Pyrene	8270	<0.100	0.280	<0.100	<0.100	0.300		
Carbon Chain Range (mg/kg)	sim. dist.	--	--	--	--	--		
PCBs (1) (mg/kg)	8080	--	--	--	--	--		
PCB-1260	8080	--	--	--	--	--		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
PCBs = Polychlorinated biphenyls
(1) VOCs, SVOCs, and PCBs not listed were not detected
SPCONF - Stockpile Confirmation Sample
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figures 7 and 8 for sample locations

TABLE 8
Analytical Data Summary
Remedial Excavation B37-RE-4 Stockpile and Confirmation Samples*

Analyte	EPA Method	Sample Number and Collection Date: B37-RE4-SP31 3/27/97	B37-RE4-SP32 3/27/97	B37-RE4-SP33 3/28/97	B37-RE4-SP34 3/31/97	B37-RE4-SP34A 4/17/97	Regulatory Levels: TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	85	13	500	110	--		
Title 22 Metals (mg/kg)								
Antimony	6010	<5.0	<5.0	<5.0	<5.0	--	500	150
Arsenic	6010	<1.0	<1.0	<1.0	<1.0	--	500	50
Barium	6010	140	130	96	130	--	10,000	1,000
Beryllium	6010	<0.1	<0.1	<0.1	<0.1	--	75	7.5
Cadmium	6010	<0.1	<0.1	<0.1	<0.1	--	100	10
Chromium (VI)	7196	<0.5	<0.5	<0.5	<0.5	--	500	50
Chromium (total)	6010	34	44	26	31	--	2,500	50
Cobalt	6010	7.9	8.2	7.6	7.8	--	8,000	800
Copper	6010	18	24	41	27	--	2,500	250
Lead (total)	6010	<1.0	<1.0	<1.0	<1.0	--	1,000	50
Mercury	7471	<0.01	<0.01	<0.01	<0.01	--	20	2
Molybdenum	6010	<0.5	<0.5	<0.5	<0.5	--	3,500	3,500
Nickel	6010	12	15	13	11	--	2,000	200
Selenium	6010	<1.0	<1.0	<1.0	<1.0	--	100	10
Silver	6010	<0.1	<0.1	<0.1	<0.1	--	500	50
Thallium	6010	<5.0	<5.0	<5.0	<5.0	--	700	70
Vanadium	6010	29	33	26	30	--	2,400	240
Zinc	6010	52	82	70	58	--	5,000	2,500
VOCs (1) (mg/kg)								
1,1-Dichloroethane	8260	<0.0025	<0.0025	<0.0025	<0.0025	--		
Tetrachloroethene	8260	<0.0025	<0.0025	<0.0025	<0.0025	--		
1,3,5-Trimethylbenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	--		
1,2,4-Trimethylbenzene	8260	<0.0025	<0.0025	0.0056	<0.0025	--		
Naphthalene	8260	<0.0025	<0.0025	<0.0025	<0.0025	--		
p-Isopropyltoluene	8260	<0.0025	<0.0025	<0.0025	<0.0025	--		
m,p-xylene	8260	--	--	--	--	--		
Total xylenes	8260	<0.0025	<0.0025	<0.0025	<0.0025	--		
SVOCs (1) (mg/kg)								
Acenaphthene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Anthracene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Benzo (a) Anthracene	8270	<0.100	0.190	0.240	<0.100	<0.100		
Benzo (b) Fluoranthene	8270	<0.250	<0.250	<0.250	<0.250	<0.250		
Benzo (k) Fluoranthene	8270	<0.250	0.270	<0.250	<0.250	<0.250		
Benzo (a) Pyrene	8270	<0.250	<0.250	<0.250	<0.250	<0.250		
Benzo (g,h,i) Perylene	8270	<0.250	<0.250	<0.250	<0.250	<0.250		
4-Chlorophenyl phenyl ether	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Chrysene	8270	<0.100	0.400	0.300	<0.100	<0.100		
Dibenz (a,h) Anthracene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
bis (2-Ethylhexyl)Phthalate	8270	<0.100	<0.100	<0.100	<0.100	0.120		
Fluoranthene	8270	0.220	<0.100	0.360	<0.100	<0.100		
Fluorene	8270	<0.100	<0.100	0.100	<0.100	<0.100		
Indeno (1,2,3-cd)Pyrene	8270	<0.250	<0.250	<0.250	<0.250	<0.250		
2-Methylnaphthalene	8270	<0.100	<0.100	0.190	<0.100	<0.100		
Phenanthrene	8270	<0.100	<0.100	0.290	<0.100	<0.100		
Pyrene	8270	0.280	<0.100	0.390	0.110	<0.100		
Carbon Chain Range (mg/kg)	sim. dist.	--	--	--	--	--		
PCBs (1) (mg/kg)	8080	--	--	--	--	--		
PCB-1260	8080	--	--	--	--	--		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
PCBs = Polychlorinated biphenyls

(1) VOCs, SVOCs, and PCBs not listed were not detected
SPCONF - Stockpile Confirmation Sample
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figures 7 and 8 for sample locations

TABLE 8
Analytical Data Summary
Remedial Excavation B37-RE-4 Stockpile and Confirmation Samples*

		Sample Number and Collection Date					
Analyte	EPA Method	B37-RE4-SP34B 4/17/97	B37-RE4-SP34C 4/17/97	B37-RE4-SP34D 4/17/97	B37-RE4-SP34E 4/17/97	Regulatory Levels TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	--	--	--	--		
Title 22 Metals (mg/kg)							
Antimony	6010	--	--	--	--	500	150
Arsenic	6010	--	--	--	--	500	50
Barium	6010	--	--	--	--	10,000	1,000
Beryllium	6010	--	--	--	--	75	7.5
Cadmium	6010	--	--	--	--	100	10
Chromium (VI)	7196	--	--	--	--	500	50
Chromium (total)	6010	--	--	--	--	2,500	50
Cobalt	6010	--	--	--	--	8,000	800
Copper	6010	--	--	--	--	2,500	250
Lead (total)	6010	--	--	--	--	1,000	50
Mercury	7471	--	--	--	--	20	2
Molybdenum	6010	--	--	--	--	3,500	3,500
Nickel	6010	--	--	--	--	2,000	200
Selenium	6010	--	--	--	--	100	10
Silver	6010	--	--	--	--	500	50
Thallium	6010	--	--	--	--	700	70
Vanadium	6010	--	--	--	--	2,400	240
Zinc	6010	--	--	--	--	5,000	2,500
VOCs (1) (mg/kg)							
1,1-Dichloroethane	8260	--	--	--	--		
Tetrachloroethene	8260	--	--	--	--		
1,3,5-Trimethylbenzene	8260	--	--	--	--		
1,2,4-Trimethylbenzene	8260	--	--	--	--		
Naphthalene	8260	--	--	--	--		
p-Isopropyltoluene	8260	--	--	--	--		
m,p-xylene	8260	--	--	--	--		
Total xylenes	8260	--	--	--	--		
SVOCs (1) (mg/kg)							
Acenaphthene	8270	<0.100	<0.100	<0.100	<0.100		
Anthracene	8270	<0.100	<0.100	<0.100	<0.100		
Benzo (a) Anthracene	8270	<0.100	0.120	<0.100	0.290		
Benzo (b) Fluoranthene	8270	<0.250	<0.250	<0.250	0.340		
Benzo (k) Fluoranthene	8270	<0.250	<0.250	<0.250	<0.250		
Benzo (a) Pyrene	8270	<0.250	<0.250	<0.250	0.300		
Benzo (g,h,i) Perylene	8270	<0.250	<0.250	<0.250	<0.250		
4-Chlorophenyl phenyl ether	8270	<0.100	<0.100	<0.100	<0.100		
Chrysene	8270	0.110	0.130	<0.100	0.320		
Dibenz (a,h) Anthracene	8270	<0.100	<0.100	<0.100	<0.100		
bis (2-Ethylhexyl)Phthalate	8270	<0.100	<0.100	<0.100	<0.100		
Fluoranthene	8270	0.160	0.200	<0.100	0.540		
Fluorene	8270	<0.100	<0.100	<0.100	<0.100		
Indeno (1,2,3-cd)Pyrene	8270	<0.250	<0.250	<0.250	<0.250		
2-Methylnaphthalene	8270	<0.100	<0.100	<0.100	<0.100		
Phenanthrene	8270	<0.100	<0.100	<0.100	0.150		
Pyrene	8270	0.120	0.160	<0.100	0.440		
Carbon Chain Range (mg/kg)	sim. dist.	--	--	--	--		
PCBs (1) (mg/kg)	8080	--	--	--	--		
PCB-1260	8080	--	--	--	--		

mg/L = milligrams per liter
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation

VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
PCBs = Polychlorinated biphenyls

(1) VOCs, SVOCs, and PCBs not listed were not detected
SPCONF - Stockpile Confirmation Sample
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figures 7 and 8 for sample locations

TABLE 8
Analytical Data Summary
Remedial Excavation B37-RE-4 Stockpile and Confirmation Samples*

Analyte	EPA Method	Sample Number and Collection Date: B37-RE4-SPCONF 3/25/97	B37-RE4-SPCONFA 4/21/97	Regulatory Levels: TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	1,400	- -		
Title 22 Metals (mg/kg)					
Antimony	6010	<5.0	- -	500	150
Arsenic	6010	<1.0	- -	500	50
Barium	6010	130	- -	10,000	1,000
Beryllium	6010	<0.1	- -	75	7.5
Cadmium	6010	<0.1	- -	100	10
Chromium (VI)	7196	<0.5	- -	500	50
Chromium (total)	6010	29	- -	2,500	50
Cobalt	6010	8.9	- -	8,000	800
Copper	6010	16	- -	2,500	250
Lead (total)	6010	<1.0	- -	1,000	50
Mercury	7471	<0.01	- -	20	2
Molybdenum	6010	<0.5	- -	3,500	3,500
Nickel	6010	12	- -	2,000	200
Selenium	6010	<1.0	- -	100	10
Silver	6010	<0.1	- -	500	50
Thallium	6010	<5.0	- -	700	70
Vanadium	6010	33	- -	2,400	240
Zinc	6010	56	- -	5,000	2,500
VOCs (1) (mg/kg)					
1,1-Dichloroethane	8260	<0.0025	- -		
Tetrachloroethene	8260	<0.0025	- -		
1,3,5-Trimethylbenzene	8260	<0.0025	- -		
1,2,4-Trimethylbenzene	8260	<0.0025	- -		
Naphthalene	8260	<0.0025	- -		
p-Isopropyltoluene	8260	<0.0025	- -		
m,p-xylene	8260	- -	- -		
Total xylenes	8260	<0.0025	- -		
SVOCs (1) (mg/kg)					
Acenaphthene	8270	<0.200	- -		
Anthracene	8270	<0.200	- -		
Benzo (a) Anthracene	8270	<0.200	- -		
Benzo (b) Fluoranthene	8270	<0.500	- -		
Benzo (k) Fluoranthene	8270	<0.500	- -		
Benzo (a) Pyrene	8270	<0.500	- -		
Benzo (g,h,i) Perylene	8270	<0.500	- -		
4-Chlorophenyl phenyl ether	8270	<0.200	- -		
Chrysene	8270	<0.200	- -		
Dibenz (a,h) Anthracene	8270	<0.200	- -		
bis (2-Ethylhexyl)Phthalate	8270	<0.200	- -		
Fluoranthene	8270	<0.200	- -		
Fluorene	8270	<0.200	- -		
Indeno (1,2,3-cd)Pyrene	8270	<0.500	- -		
2-Methylnaphthalene	8270	<0.200	- -		
Phenanthrene	8270	<0.200	- -		
Pyrene	8270	<0.200	- -		
Carbon Chain Range (mg/kg)	sim. dist.	- -	- -		
PCBs (1) (mg/kg)	8080	- -			
PCB-1260	8080	- -	0.057		

mg/L = milligrams per liter
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation

VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
PCBs = Polychlorinated biphenyls

(1) VOCs, SVOCs, and PCBs not listed were not detected
SPCONF - Stockpile Confirmation Sample
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figures 7 and 8 for sample locations

TABLE 9
Analytical Data Summary
Remedial Excavation B37-RE-4 Grid Samples

Analyte	EPA Method	Sample Number, Collection Date, Grid Location and Depth						Regulatory Levels	
		B37-D8-2' 2/20/97 D-8 @ 2' bgs*	B37-D9-1' 2/20/97 D-9 @ 1' bgs*	B37-A11-4' 2/27/97 A-11 @ 4' bgs*	B37-A13-4' 2/27/97 A-13 @ 4' bgs*	B37-A14-4' 2/27/97 A-14 @ 4' bgs*	B37-A5-3' 2/28/97 A-5 @ 3' bgs*	TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	23,000	<10	3,100	93	4,300	56		
Title 22 Metals (mg/kg)									
Antimony	6010	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	500	150
Arsenic	6010	<0.11	<0.11	1.94	<0.11	<0.11	<0.11	500	50
Barium	6010	115	40.6	107	128	118	122	10,000	1,000
Beryllium	6010	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	75	7.5
Cadmium	6010	0.175	<0.05	0.31	0.56	10.3**	1.76	100	10
Chromium (VI)	7196	--	--	--	--	--	--	500	50
Chromium (total)	6010	14.1	5.99	14.7	24.2	73.2***	28	2,500	50
Cobalt	6010	8.82	2.78	10.4	10.8	9.92	9.05	8,000	800
Copper	6010	17.7	5.00	16.3	21.7	48.2	21.9	2,500	250
Lead (total)	6010	1.84	5.16	6.73	10.8	34.0	15.6	1,000	50
Mercury	7471	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	20	2
Molybdenum	6010	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	3,500	3,500
Nickel	6010	12.4	<5.00	12.1	14.9	14.7	11.4	2,000	200
Selenium	6010	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	100	10
Silver	6010	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	500	50
Thallium	6010	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	700	70
Vanadium	6010	32.4	11.2	32.3	41.2	36.2	31.6	2,400	240
Zinc	6010	67.3	22.7	45.2	67.8	156	65.7	5,000	2,500
VOCs (1) (mg/kg)									
1,1-Dichloroethane	8260	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
Tetrachloroethene	8260	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
1,3,5-Trimethylbenzene	8260	0.010	<0.005	<0.005	<0.005	<0.005	<0.005		
1,2,4-Trimethylbenzene	8260	0.031	<0.005	<0.005	<0.005	<0.005	<0.005		
Naphthalene	8260	0.096	<0.005	<0.005	<0.005	<0.005	<0.005		
p-Isopropyltoluene	8260	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
m,p-Xylene	8260	<0.005	<0.005	<0.005	<0.005	<0.005	--		
Total xylenes	8260	--	--	--	--	--	<0.005		
SVOCs (1) (mg/kg)									
Acenaphthene	8270	<5.000	<0.330	<0.330	<0.330	<0.660	<0.330		
Anthracene	8270	<5.000	<0.330	<0.330	<0.330	<0.660	<0.330		
Benzo (a) Anthracene	8270	<5.000	<0.330	<0.330	1.500	<0.660	0.420		
Benzo (b) Fluoranthene	8270	<5.000	<0.330	<0.330	1.900	<0.660	0.460		
Benzo (k) Fluoranthene	8270	<5.000	<0.330	<0.330	1.000	<0.660	0.400		
Benzo (a) Pyrene	8270	<5.000	<0.330	<0.330	1.800	<0.660	0.540		
Benzo (g,h,i) Perylene	8270	<5.000	<0.330	<0.330	1.800	<0.660	0.510		
4-Chloro-3-Methylphenol	8270	<5.000	<0.330	<0.330	<0.330	<0.660	<0.330		
Chrysene	8270	<5.000	<0.330	<0.330	1.800	<0.660	0.510		
Dibenz (a,h) Anthracene	8270	<5.000	<0.330	<0.330	<0.330	<0.660	<0.330		
bis (2-Ethylhexyl)Phthalate	8270	10.000	<0.330	<0.330	<0.330	<0.660	<0.330		
Fluoranthene	8270	<5.000	<0.330	<0.330	2.000	<0.660	0.570		
Indeno(1,2,3-cd)Pyrene	8270	<5.000	<0.330	<0.330	1.500	<0.660	0.420		
2-Methylnaphthalene	8270	<5.000	<0.330	<0.330	<0.330	<0.660	<0.330		
Phenanthrene	8270	<5.000	<0.330	<0.330	0.540	<0.660	<0.330		
Pyrene	8270	<5.000	<0.330	<0.330	1.300	<0.660	0.390		
Carbon Chain Range (mg/kg)									
C08-C09	sim. dist.	ND	--	--	--	--	--		
C10-C11	sim. dist.	380	--	--	--	--	--		
C12-C13	sim. dist.	2,900	--	--	--	--	--		
C14-C15	sim. dist.	240	--	--	--	--	--		
C16-C17	sim. dist.	83	--	--	--	--	--		
C18-C19	sim. dist.	680	--	--	--	--	--		
C20-C23	sim. dist.	2,600	--	--	--	--	--		
C24-C27	sim. dist.	1,500	--	--	--	--	--		
C28-C31	sim. dist.	900	--	--	--	--	--		
C32-C35	sim. dist.	310	--	--	--	--	--		
C36-C39	sim. dist.	ND	--	--	--	--	--		
C40+	sim. dist.	ND	--	--	--	--	--		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
-- = not analyzed
ND = not detected
** Waste Extraction Test performed on this sample. Result was <0.5 mg/L
*** Waste Extraction Test performed on this sample Result was 0.820 mg/L

TRPH = Total Recoverable Petroleum Hydrocarbons
(1) VOCs and SVOCs not listed were not detected
sim.dist. = simulated distillation

bgs = below ground surface
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figure 3 for sample locations

TABLE 10
Analytical Data Summary
Remedial Excavation B37-RE-4 Hot Spot Samples

Analyte	EPA Method	Sample Number, Collection Date, Grid Location and Depth: B37-GS-34 2/14/97 C-9 @ 0.5' bgs*	B37-GS-35 2/17/97 C/D-16 @ 2.0' bgs*	B37-GS-40 2/17/97 C/D-15.5 @ 3.0' bgs*	Regulatory Levels: TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	4,600	<10	9,300		
Title 22 Metals (mg/kg)						
Antimony	6010	<0.500	<0.500	<0.500	500	150
Arsenic	6010	<0.11	<0.11	<0.11	500	50
Barium	6010	35.6	107	123	10,000	1,000
Beryllium	6010	<0.06	<0.06	<0.06	75	7.5
Cadmium	6010	<0.05	0.106	<0.05	100	10
Chromium (VI)	7196	--	--	--	500	50
Chromium (total)	6010	6.15	16.8	8.42	2,500	50
Cobalt	6010	<2.50	8.25	4.96	8,000	800
Copper	6010	4.79	21.8	11.8	2,500	250
Lead (total)	6010	1.94	3.94	2.39	1,000	50
Mercury	7471	<0.200	<0.200	<0.200	20	2
Molybdenum	6010	<2.50	<2.50	<2.50	3,500	3,500
Nickel	6010	<5.00	14.4	6.51	2,000	200
Selenium	6010	<5.00	<5.00	<5.00	100	10
Silver	6010	<5.00	<5.00	<5.00	500	50
Thallium	6010	<0.500	<0.500	<0.500	700	70
Vanadium	6010	11.2	35	23.8	2,400	240
Zinc	6010	29.8	51.8	31.8	5,000	2,500
VOCs (1) (mg/kg)						
1,1-Dichloroethane	8260	<0.005	--	<0.005		
Tetrachloroethene	8260	<0.005	--	<0.005		
1,3,5-Trimethylbenzene	8260	0.040	--	<0.005		
1,2,4-Trimethylbenzene	8260	0.090	--	0.012		
Naphthalene	8260	0.070	--	0.030		
p-Isopropyltoluene	8260	0.0086	--	<0.005		
m,p-xylene	8260	0.0057	--	<0.005		
Total xylenes	8260	--	--	--		
SVOCs (1) (mg/kg)						
Acenaphthene	8270	<3.300	--	<0.660		
Anthracene	8270	<3.300	--	<0.660		
Benzo (a) Anthracene	8270	<3.300	--	<0.660		
Benzo (b) Fluoranthene	8270	<3.300	--	<0.660		
Benzo (k) Fluoranthene	8270	<3.300	--	<0.660		
Benzo (a) Pyrene	8270	<3.300	--	<0.660		
Benzo (g,h,i) Perylene	8270	<3.300	--	<0.660		
4-Chlorophenyl phenyl ether	8270	<3.300	--	<0.660		
Chrysene	8270	<3.300	--	<0.660		
Dibenz (a,h) Anthracene	8270	<3.300	--	<0.660		
bis (2-Ethylhexyl)Phthalate	8270	4.600	--	1.700		
Fluoranthene	8270	<3.300	--	<0.660		
Indeno (1,2,3-cd)Pyrene	8270	<3.300	--	<0.660		
2-Methylnaphthalene	8270	<3.300	--	0.810		
Phenanthrene	8270	<3.300	--	<0.660		
Pyrene	8270	<3.300	--	<0.660		
Carbon Chain Range (mg/kg)						
C08-C09	sim. dist.	--	--	--		
C10-C11	sim. dist.	--	--	--		
C12-C13	sim. dist.	--	--	--		
C14-C15	sim. dist.	--	--	--		
C16-C17	sim. dist.	--	--	--		
C18-C19	sim. dist.	--	--	--		
C20-C23	sim. dist.	--	--	--		
C24-C27	sim. dist.	--	--	--		
C28-C31	sim. dist.	--	--	--		
C32-C35	sim. dist.	--	--	--		
C36-C39	sim. dist.	--	--	--		
C40+	sim. dist.	--	--	--		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
-- = not analyzed
bgs = below ground surface

sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds

(1) VOCs and SVOCs not listed were not detected
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration
TRPH = Total Recoverable Petroleum Hydrocarbons

* Refer to Figure 3 for sample locations

TABLE 10
Analytical Data Summary
Remedial Excavation B37-RE-4 Hot Spot Samples

Analyte	EPA Method	Sample Number, Collection Date, Grid Location and Depth: B37-GS-41-3' 2/18/97 C/D-5.5 @ 3.0' bgs*	B37-GS-42-3' 2/19/97 C/D-8 @ 3.0' bgs*	B37-GS-44-2' 2/20/97 C/D-2.5 @ 2.0' bgs*	Regulatory Levels: TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	1,900	130	2,900		
Title 22 Metals (mg/kg)						
Antimony	6010	<0.500	<0.500	<0.500	500	150
Arsenic	6010	<0.11	<0.11	<0.11	500	50
Barium	6010	117	149	130	10,000	1,000
Beryllium	6010	<0.06	<0.06	<0.06	75	7.5
Cadmium	6010	0.23	0.126	0.518	100	10
Chromium (VI)	7196	--	--	--	500	50
Chromium (total)	6010	18.8	18	20.3	2,500	50
Cobalt	6010	9.76	9.39	9.74	8,000	800
Copper	6010	21.3	22.0	19.4	2,500	250
Lead (total)	6010	5.43	10.9	7.03	1,000	50
Mercury	7471	<0.200	<0.200	<0.200	20	2
Molybdenum	6010	<2.50	<2.50	<2.50	3,500	3,500
Nickel	6010	13.8	13.2	12.7	2,000	200
Selenium	6010	<5.00	<5.00	<5.00	100	10
Silver	6010	<5.00	<5.00	<5.00	500	50
Thallium	6010	<0.500	<0.500	<0.500	700	70
Vanadium	6010	38.3	38.9	36.6	2,400	240
Zinc	6010	60.5	80.9	59.8	5,000	2,500
VOCs (1) (mg/kg)						
1,1-Dichloroethane	8260	0.007	--	<0.005		
Tetrachloroethene	8260	0.027	--	<0.005		
1,3,5-Trimethylbenzene	8260	<0.005	--	<0.005		
1,2,4-Trimethylbenzene	8260	<0.005	--	<0.005		
Naphthalene	8260	0.015	--	<0.005		
p-Isopropyltoluene	8260	0.006	--	<0.005		
m,p-xylene	8260	<0.005	--	<0.005		
Total xylenes	8260	--	--	--		
SVOCs (1) (mg/kg)						
Acenaphthene	8270	--	--	<0.330		
Anthracene	8270	--	--	<0.330		
Benzo (a) Anthracene	8270	--	--	<0.330		
Benzo (b) Fluoranthene	8270	--	--	<0.330		
Benzo (k) Fluoranthene	8270	--	--	<0.330		
Benzo (a) Pyrene	8270	--	--	<0.330		
Benzo (g,h,i) Perylene	8270	--	--	<0.330		
4-Chlorophenyl phenyl ether	8270	--	--	<0.330		
Chrysene	8270	--	--	<0.330		
Dibenz (a,h) Anthracene	8270	--	--	<0.330		
bis (2-Ethylhexyl)Phthalate	8270	--	--	<0.330		
Fluoranthene	8270	--	--	<0.330		
Indeno (1,2,3-cd)Pyrene	8270	--	--	<0.330		
2-Methylnaphthalene	8270	--	--	<0.330		
Phenanthrene	8270	--	--	<0.330		
Pyrene	8270	--	--	<0.330		
Carbon Chain Range (mg/kg)						
C08-C09	sim. dist.	--	--	--		
C10-C11	sim. dist.	--	--	--		
C12-C13	sim. dist.	--	--	--		
C14-C15	sim. dist.	--	--	--		
C16-C17	sim. dist.	--	--	--		
C18-C19	sim. dist.	--	--	--		
C20-C23	sim. dist.	--	--	--		
C24-C27	sim. dist.	--	--	--		
C28-C31	sim. dist.	--	--	--		
C32-C35	sim. dist.	--	--	--		
C36-C39	sim. dist.	--	--	--		
C40+	sim. dist.	--	--	--		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
– = not analyzed
bgs = below ground surface

sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds

(1) VOCs and SVOCs not listed were not detected
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration
TRPH = Total Recoverable Petroleum Hydrocarbons

* Refer to Figure 3 for sample locations

TABLE 10
Analytical Data Summary
Remedial Excavation B37-RE-4 Hot Spot Samples

		Sample Number, Collection Date, Grid Location and Depth			
		B37-GS-45-3'	B37-GS-47-3'		
		2/24/97	2/26/97		
Analyte	EPA Method	C-8 @ 3.0' bgs*	C/D-14 @ 3.0' bgs*	Regulatory Levels	
				TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	24,000	5,600		
Title 22 Metals (mg/kg)					
Antimony	6010	<0.500	<0.500	500	150
Arsenic	6010	<0.11	<0.11	500	50
Barium	6010	103	105	10,000	1,000
Beryllium	6010	<0.06	<0.06	75	7.5
Cadmium	6010	0.171	0.502	100	10
Chromium (VI)	7196	--	--	500	50
Chromium (total)	6010	17.7	23.1	2,500	50
Cobalt	6010	9.10	9.12	8,000	800
Copper	6010	20.6	22.5	2,500	250
Lead (total)	6010	6.59	11.3	1,000	50
Mercury	7471	<0.200	<0.200	20	2
Molybdenum	6010	<2.50	<2.50	3,500	3,500
Nickel	6010	12.7	12.2	2,000	200
Selenium	6010	<5.00	<5.00	100	10
Silver	6010	<5.00	<5.00	500	50
Thallium	6010	<0.500	<0.500	700	70
Vanadium	6010	37.5	33.2	2,400	240
Zinc	6010	64.2	71.7	5,000	2,500
VOCs (1) (mg/kg)					
1,1-Dichloroethane	8260	<0.005	--		
Tetrachloroethene	8260	<0.005	--		
1,3,5-Trimethylbenzene	8260	<0.005	--		
1,2,4-Trimethylbenzene	8260	0.018	--		
Naphthalene	8260	0.085	--		
p-Isopropyltoluene	8260	<0.005	--		
m,p-xylene	8260	<0.005	--		
Total xylenes	8260	--	--		
SVOCs (1) (mg/kg)					
Acenaphthene	8270	<3.300	--		
Anthracene	8270	<3.300	--		
Benzo (a) Anthracene	8270	<3.300	--		
Benzo (b) Fluoranthene	8270	<3.300	--		
Benzo (k) Fluoranthene	8270	<3.300	--		
Benzo (a) Pyrene	8270	<3.300	--		
Benzo (g,h,i) Perylene	8270	<3.300	--		
4-Chlorophenyl phenyl ether	8270	<3.300	--		
Chrysene	8270	<3.300	--		
Dibenz (a,h) Anthracene	8270	<3.300	--		
bis (2-Ethylhexyl)Phthalate	8270	4.200	--		
Fluoranthene	8270	<3.300	--		
Indeno (1,2,3-cd)Pyrene	8270	<3.300	--		
2-Methylnaphthalene	8270	<3.300	--		
Phenanthrene	8270	<3.300	--		
Pyrene	8270	<3.300	--		
Carbon Chain Range (mg/kg)					
C08-C09	sim. dist.	<10	--		
C10-C11	sim. dist.	180	--		
C12-C13	sim. dist.	590	--		
C14-C15	sim. dist.	110	--		
C16-C17	sim. dist.	85	--		
C18-C19	sim. dist.	350	--		
C20-C23	sim. dist.	970	--		
C24-C27	sim. dist.	570	--		
C28-C31	sim. dist.	420	--		
C32-C35	sim. dist.	240	--		
C36-C39	sim. dist.	76	--		
C40+	sim. dist.	49	--		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
-- = not analyzed
bgs = below ground surface
(1) VOCs and SVOCs not listed were not detected

sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
SVOCs = Semi-volatile Organic Compounds
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

TTLC = California Total Threshold Limit Concentration

* Refer to Figure 3 for sample locations

TABLE 11
Analytical Data Summary
Volcano Soil Stockpile and Confirmation Samples*

Analyte	EPA Method	Sample Number and Collection Date												Regulatory Levels	
		VSS-SP1 3/17/97	VSS-SP2 3/17/97	VSS-SP3 3/17/97	VSS-SP4 3/17/97	VSS-SP5 3/17/97	VSS-SP6 3/17/97	VSS-SP7 3/17/97	VSS-SP8 3/17/97	VSS-SP9 3/17/97	VSS-SP9A 4/3/97	VSS-SP9B 4/3/97	VSS-SP9C 4/3/97	TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	18	22	68	<8.0	26	520	60	46	58	--	--	--		
Title 22 Metals (mg/kg)															
Antimony	6010	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	500	150
Arsenic	6010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	500	50
Barium	6010	120	81	82	100	69	82	74	110	96	96	66	80	10,000	1,000
Beryllium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	75	7.5
Cadmium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	100	10
Chromium (VI)	7196	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	500	50
Chromium (total)	6010	26	19	16	25	12	18	19	23	26	23	13	21	2,500	50
Cobalt	6010	8.1	5.3	6.1	7.8	4.3	7.4	5.1	7.9	8.1	7.1	6.2	6.5	8,000	800
Copper	6010	12	10	30	14	7.1	13	12	13	2000**	15	14	11	2,500	250
Lead (total)	6010	<1.0	<1.0	13	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	18	<1.0	1,000	50
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	20	2
Molybdenum	6010	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3,500	3,500
Nickel	6010	13	8.5	9.7	13	5.6	9.6	8.4	11	13	13	11	11	2,000	200
Selenium	6010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	100	10
Silver	6010	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	500	50
Thallium	6010	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	700	70
Vanadium	6010	32	26	22	32	19	25	20	26	29	23	16	22	2,400	240
Zinc	6010	41	35	36	49	47	45	33	47	46	38	35	33	5,000	2,500
VOCs (1) (mg/kg)	8260	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--		
SVOCs (1) (mg/kg)															
Benzo (a) Anthracene	8270	<0.100	<0.100	0.150	<0.100	<0.100	<0.100	<0.100	<0.100	0.100	--	--	--		
Chrysene	8270	<0.100	<0.100	0.250	<0.100	<0.100	<0.100	<0.100	<0.100	0.130	--	--	--		
Fluoranthene	8270	<0.100	<0.100	0.110	<0.100	<0.100	<0.100	<0.100	<0.100	0.240	--	--	--		
Phenanthrene	8270	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.240	--	--	--		
Pyrene	8270	<0.100	<0.100	0.340	<0.100	<0.100	<0.100	<0.100	<0.100	0.420	--	--	--		
Carbon Chain Range (mg/kg)	sim. dist	--	--	--	--	--	--	--	--	--	--	--	--		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
-- = not analyzed
ND = none detected

sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons

(1) VOCs and SVOCs not listed were not detected
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration
CONF = Confirmation sample
** Waste Extraction Test performed on this sample Result was 0.42 mg/L

* Refer to Figure 9 for sample locations

TABLE 11
Analytical Data Summary
Volcano Soil Stockpile and Confirmation Samples*

Analyte	EPA Method	Sample Number and Collection Date: VSS-SP9D 4/3/97	VSS-SP9E 4/3/97	VSS-SP10 3/17/97	VSS-SP11 3/17/97	VSS-SP12 3/17/97	VSS-SP13 3/17/97	VSS-SP14 3/17/97	VSS-SP15 4/7/97	VSS-SP16 4/7/97	VSS-SP17 4/7/97	VSS-SP18 4/7/97	VSS-CONF 3/25/97	Regulatory Levels: TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	--	--	220	35	50	58	12	--	--	--	--	850		
Title 22 Metals (mg/kg)															
Antimony	6010	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	500	150
Arsenic	6010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	500	50
Barium	6010	92	92	65	66	79	100	92	100	96	110	120	110	10,000	1,000
Beryllium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	75	7.5
Cadmium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	100	10
Chromium (VI)	7196	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	500	50
Chromium (total)	6010	19	24	19	19	19	21	19	21	23	26	25	24	2,500	50
Cobalt	6010	6.5	7.8	4.8	5.0	5.4	8.4	6.9	6.5	6.5	7.7	8.6	6.2	8,000	800
Copper	6010	12	17	10	10	10	13	11	13	13	14	15	17	2,500	250
Lead (total)	6010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	7.1	<1.0	<1.0	38	1,000	50
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	20	2
Molybdenum	6010	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3,500	3,500
Nickel	6010	10	14	9.3	11	9.2	12	10	16	15	16	16	13	2,000	200
Selenium	6010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	100	10
Silver	6010	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	500	50
Thallium	6010	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	700	70
Vanadium	6010	22	24	19	25	24	26	25	25	28	33	30	27	2,400	240
Zinc	6010	37	39	41	29	41	36	35	43	50	50	46	60	5,000	2,500
VOCs (1) (mg/kg)	8260	--	--	ND	ND	ND	ND	ND	--	--	--	--	ND		
SVOCs (1) (mg/kg)															
Benzo (a) Anthracene	8270	--	--	<0.100	<0.100	<0.100	<0.100	<0.100	--	--	--	--	<0.100		
Chrysene	8270	--	--	<0.100	<0.100	<0.100	<0.100	<0.100	--	--	--	--	<0.100		
Fluoranthene	8270	--	--	<0.100	<0.100	<0.100	<0.100	<0.100	--	--	--	--	0.170		
Phenanthrene	8270	--	--	<0.100	<0.100	<0.100	<0.100	<0.100	--	--	--	--	0.130		
Pyrene	8270	--	--	<0.100	<0.100	<0.100	<0.100	<0.100	--	--	--	--	0.350		
Carbon Chain Range (mg/kg)	sim. dist.	--	--	--	--	--	--	--	--	--	--	--	--		

mg/kg = micrograms per kilogram
mg/L = milligrams per liter
-- = not analyzed
ND = none detected

sim.dist = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons

(1) VOCs and SVOCs not listed were not detected
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration
CONF = Confirmation sample

* Refer to Figure 9 for sample locations

TABLE 12
Draft Health-Based Screening Criteria (HBSC)
(Page 1 of 4)

Compounds	Const. Worker Exposure Scenario (mg/kg)	Com/Ind Worker Exposure Scenario (mg/kg)	Proposed HBSC (mg/kg)
1,1,1,2-tetrachloroethane	4.19E+02	2.40E+03	4.19E+02
1,1,2,2-tetrachloroethane	5.29E+01	2.50E+02	5.29E+01
1,1,2-trichloroethane	1.56E+02	1.59E+02	1.56E+02
1,1-dichloroethane	1.06E+03	1.88E+02	1.88E+02
1,1-dichloroethene	1.58E+00	6.82E-02	6.82E-02
1,2,3-trichloropropane	1.97E+00	NA	1.97E+00
1,2,4-trichlorobenzene	1.74E+02	7.91E+06	1.74E+02
1,2-dibromo-3-chloropropane	2.09E+00	1.25E+01	2.09E+00
1,2-dibromoethane	4.71E+00	4.08E+01	4.71E+00
1,2-dichlorobenzene	NA	1.00E+06	1.00E+06
1,2-dichloroethane	1.14E+02	3.76E+01	3.76E+01
1,2-dichloropropane	6.74E+00	1.21E+00	1.21E+00
1,2-diphenylhydrazine	2.03E+01	3.93E+07	2.03E+01
1,3-dichloropropene	3.69E+01	1.11E+02	3.69E+01
1,4-dichlorobenzene	3.97E+02	7.30E+03	3.97E+02
2,4,5-trichlorophenol	1.70E+04	NA	1.70E+04
2,4,6-trichlorophenol	2.51E+02	1.84E+06	2.51E+02
2,4-dichlorophenol	5.15E+01	NA	5.15E+01
2,4-dimethylphenol	3.46E+03	NA	3.46E+03
2,4-dinitrophenol	1.98E+00	NA	1.98E+00
2,4-dinitrotoluene	3.48E+01	1.27E+06	3.48E+01
2,6-dinitrotoluene	2.58E+01	NA	2.58E+01
2-butanone	2.66E+04	3.92E+05	2.66E+04
2-chlorophenol	8.04E+02	NA	8.04E+02
2-methylphenol	8.44E+03	NA	8.44E+03
2-naphthylamine	9.79E+00	2.72E+05	9.79E+00
3,3-dichlorobenzidine	1.47E+01	1.25E+08	1.47E+01
4,4-ddd	1.03E+02	1.67E+08	1.03E+02
4,4-dde	7.24E+01	4.72E+05	7.24E+01
4,4-ddt	1.22E+01	3.78E+07	1.22E+01
4-chloroaniline	6.76E+01	NA	6.76E+01
4-methyl-2-pentanone	7.68E+03	1.14E+05	7.68E+03
4-methylphenol	8.59E+01	NA	8.59E+01
acenaphthene	7.98E+03	NA	7.98E+03
acetone	1.74E+04	NA	1.74E+04
aldrin	7.33E-01	4.50E+03	7.33E-01

TABLE 12
Draft Health-Based Screening Criteria (HBSC)
(Page 2 of 4)

Compounds	Const. Worker Exposure Scenario (mg/kg)	Com/Ind Worker Exposure Scenario (mg/kg)	Proposed HBSC (mg/kg)
alpha-bhc	3.91E+00	3.87E+04	3.91E+00
aniline	7.38E+02	1.70E+06	7.38E+02
anthracene	4.06E+03	NA	4.06E+03
antimony	9.05E+00	NA	9.05E+00
aroclor 1254	8.72E-01	NA	8.72E-01
arsenic	8.87E+00	NA	8.87E+00
barium	2.52E+03	NA	2.52E+03
benzene	7.87E+01	2.50E+01	2.50E+01
benzidine	3.47E-02	2.58E+01	3.47E-02
benzo(a)anthracene	1.14E+01	3.32E+08	1.14E+01
benzo(a)pyrene	1.14E+00	1.60E+07	1.14E+00
benzo(b)fluoranthene	1.14E+01	5.35E+07	1.14E+01
benzo(k)fluoranthene	1.14E+01	1.60E+07	1.14E+01
benzoic acid	6.97E+04	NA	6.97E+04
benzyl alcohol	1.74E+04	NA	1.74E+04
benzyl chloride	8.79E+01	6.72E+02	8.79E+01
beryllium**	1.82E+02	NA	1.82E+02
beta-bhc	1.37E+01	1.65E+06	1.37E+01
beta-chloronaphthalene***	NA	3.92E+06	3.92E+06
bis(2-chloro-1-methylethyl)ether	2.35E+02	4.88E+03	2.35E+02
bis(2-chloroethyl)ether	6.34E+00	1.15E+02	6.34E+00
bis(2-ethylhexyl)phthalate	2.10E+03	1.31E+10	2.10E+03
bromodichloromethane	1.45E+01	NA	1.45E+01
bromoform	3.49E+02	1.32E+04	3.49E+02
bromomethane	NA	1.92E+01	1.92E+01
cadmium**	1.64E+01	NA	1.64E+01
carbon disulfide	8.27E+02	1.17E+04	8.27E+02
carbon tetrachloride	6.18E+01	3.12E+01	3.12E+01
chlorobenzene	NA	1.08E+04	1.08E+04
chloroform	1.85E+02	1.35E+02	1.35E+02
chloromethane	2.64E+02	1.23E+01	1.23E+01
chromium iii	3.22E+04	NA	3.22E+04
chromium vi	9.73E+01	NA	9.73E+01
chrysene	1.14E+02	2.32E+09	1.14E+02
cis-1,2-dichloroethene	1.74E+03	NA	1.74E+03
copper	1.26E+03	NA	1.26E+03

TABLE 12
Draft Health-Based Screening Criteria (HBSC)
(Page 3 of 4)

Compounds	Const. Worker Exposure Scenario (mg/kg)	Com/Ind Worker Exposure Scenario (mg/kg)	Proposed HBSC (mg/kg)
cumene	1.34E+03	9.56E+03	1.34E+03
dibenzo(a,h)anthracene	3.35E+00	1.06E+11	3.35E+00
dibromochloromethane	1.02E+02	5.63E+01	5.63E+01
dichlorodifluoromethane	4.80E+02	1.17E+02	1.17E+02
dieldrin	1.22E+00	3.87E+03	1.22E+00
diethyl phthalate	1.39E+05	NA	1.39E+05
di-n-butylphthalate	1.74E+04	NA	1.74E+04
di-n-octylphthalate	3.49E+02	NA	3.49E+02
endosulfan	1.47E+02	NA	1.47E+02
endrin	7.33E+00	NA	7.33E+00
ethyl chloride	2.84E+04	2.61E+05	2.84E+04
ethylbenzene	NA	1.56E+05	1.56E+05
fluoranthene	6.97E+03	NA	6.97E+03
fluorene	6.97E+03	NA	6.97E+03
gamma-bhc	2.30E+01	4.39E+04	2.30E+01
heptachlor	2.77E+00	2.97E+02	2.77E+00
heptachlor epoxide	3.18E-01	2.25E+02	3.18E-01
hexachlorobenzene	9.20E+00	4.66E+02	9.20E+00
hexachlorobutadiene	2.13E+02	1.19E+04	2.13E+02
hexachlorocyclopentadiene	1.88E+01	1.63E+02	1.88E+01
hexachloroethane	1.74E+02	4.00E+04	1.74E+02
indeno(1,2,3-cd)pyrene	1.47E+01	2.05E+10	1.47E+01
isophorone	1.81E+04	NA	1.81E+04
mercury	6.78E+00	NA	6.78E+00
methylene chloride	8.31E+02	2.20E+02	2.20E+02
molybdenum	1.24E+03	NA	1.24E+03
n-butylbenzyl phthalate	3.49E+03	NA	3.49E+03
nickel	3.70E+02	NA	3.70E+02
nitroaniline, o-	1.62E+03	4.08E+05	1.62E+03
nitrobenzene	8.20E+01	2.97E+04	8.20E+01
nitrosodiphenylamine, p-	7.95E+02	1.72E+06	7.95E+02
n-nitrosodimethylamine	1.10E+00	NA	1.10E+00
n-nitroso-di-n-propylamine	2.33E+00	7.44E+01	2.33E+00
n-nitrosodiphenylamine	1.94E+03	4.20E+06	1.94E+03
o-chlorotoluene	3.49E+03	NA	3.49E+03
pentachlorophenol	3.05E+02	2.17E+09	3.05E+02

TABLE 12
Draft Health-Based Screening Criteria (HBSC)
(Page 4 of 4)

Compounds	Const. Worker Exposure Scenario (mg/kg)	Com/Ind Worker Exposure Scenario (mg/kg)	Proposed HBSC (mg/kg)
phenol	1.05E+04	NA	1.05E+04
pyrene	2.35E+03	NA	2.35E+03
selenium	1.77E+02	NA	1.77E+02
silver	5.98E+01	NA	5.98E+01
styrene	6.03E+04	1.26E+06	6.03E+04
tetrachloroethene	2.48E+02	8.20E+01	8.20E+01
toluene	3.70E+04	3.71E+04	3.70E+04
trans-1,2-dichloroethene	3.49E+03	NA	3.49E+03
trichloroethene	7.08E+02	3.41E+02	3.41E+02
trichlorofluoromethane	6.27E+03	8.16E+03	6.27E+03
vanadium	8.37E+01	NA	8.37E+01
vinyl acetate	1.44E+03	3.86E+04	1.44E+03
vinyl chloride	3.13E-01	8.05E-03	8.05E-03
xylenes***	2.16E+04	1.35E+06	2.16E+04
zinc	8.26E+03	NA	8.26E+03

Notes:

NA The required toxicity factors (subchronic - const. or inhalation - C/I) under the applicable exposure scenario were unavailable

* All HBSC are base on a hazard quotient of 0.2 and an incremental lifetime cancer risk of $1X10^{-6}$

** No oral cancer potency factor was used for these compounds based on conversations with Jim Collins at Air Toxicology and Epidemiology Section (ATES), Office of Environmental Health Hazard Assessment (OEHHA), April 30, 1997

*** Due to the lack of toxicity data, chronic oral toxicity factors were used as inhalation toxicity factors for the purposes of deriving acceptable HBSC values